

25 August 2026

To Councillors - Cllr Danny Bonnett (Chair), Cllr Kath Greenman, Cllr Maggie Tyrrell, Cllr Chris Bloor (Vice Chair), Cllr Chris Rowe, Cllr Christine Carter, Cllr Gil Gilroy and all non-councillor Committee members

Please take notice that a meeting of the **Climate and Nature Committee** of Thornbury Town Council will be held in the **Council Chamber of the Town Hall** on **Tuesday 1 September 2026 at 7.30 pm**.

All above named Councillors are hereby **summoned**, and non-councillors invited, to attend the above meeting for the purpose of considering and resolving upon the business to be transacted at the meeting as set out hereunder.



Sharon Gardham, Climate and Nature Officer

Members are reminded that the Council has a general duty to consider the following matters in the exercise of any of its functions: Equal Opportunities (race, gender, sexual orientation, marital status and any disability), Crime & Disorder, Health & Safety, Human Rights and the need to conserve biodiversity.

Public participation: Please note that this meeting is open to the public. Please take note of the guidance notes for public participation [provided](#).

If you would not be physically able to use the stairs in the event of a fire, please inform us of your intention to attend this meeting no later than 9.00am on the Monday before, so that appropriate arrangements can be made.

AGENDA

1. To note any apologies for absence
2. To receive any members' declarations of interest
3. To receive any representations from the public relating to items on the agenda
4. To approve and sign the minutes of the Climate and Nature Committee meeting held on 16 June 2026 (paper attached)
5. To consider the decarbonisation road map and a recommendation to Full Council regarding decarbonisation measures (papers attached)
6. To receive an update on the 2026-27 Climate and Nature budget and consider the reallocation of some of the budget between spend items (papers attached)
7. To receive an update on the Watermark Town scheme (paper attached)
8. To receive an update on the Memorial Woodland plans and consider a recommendation to Full Council regarding delegated spending powers (paper attached)
9. To consider options for a Tiny Forest/Edible Forest for Thornbury (paper attached)
10. To consider potential Climate and Nature projects for 2027-28 (paper attached)
11. To note that the deadline for submission of items for inclusion on the next agenda is Tuesday 6 October 2026
12. Date of next meeting - 7.30pm on Tuesday 20 October 2026



THORNBURY TOWN COUNCIL

Minutes of the Climate and Nature Committee Meeting

held on Tuesday 16 June 2026 at 7:30pm at Council Chamber, Town Hall

Members present:	Councillors	Chris Bloor (Vice Chair) Chris Rowe Christine Carter Kath Greenman
In attendance:	Non-councillors	Emma Young (Plastic Free Thornbury) Geraldine Barnes (Thornbury in Bloom) Sharon Gardham (Climate and Nature Officer) Will Hallam (Senior Project Manager, Department for Place, South Gloucestershire Council) Alex Fraser (Landscape Architect, South Gloucestershire Council)
Members absent:	Councillors	Danny Bonnett Gil Gilroy Maggie Tyrell
	Non-Councillors	Ella Wiggans (Sustainable Thornbury) Guy Rawlinson (Holy Mowers)
CN2627.01	To note any apologies for absence. Apologies for absence were noted from Cllr Danny Bonnett (Chair), Cllr Gil Gilroy, Ella Wiggans (Sustainable Thornbury) and Guy Rawlinson (Holy Mowers).	
CN2627.02	To receive any members' declaration of interest. No declarations of interest were made by members.	
CN2627.03	To receive any representations from the public relating to items on the agenda. There were no representations from the public.	
CN2627.04	To appoint the Vice Chair of the Climate and Nature Committee It was RESOLVED to reappoint Chris Bloor as the Vice Chair of the Climate and Nature Committee. Proposed by Cllr Rowe, seconded by Cllr Greenman, unanimously agreed.	
CN2627.05	To approve and sign the minutes of the Climate and Nature Committee Meeting held on 17 February 2026. It was RESOLVED to approve the minutes of the meeting of the Climate and Nature Committee held on 17 February 2026 as an accurate record of the proceedings and the minutes were signed by the Vice Chair.	
CN2627.06	To receive an update from South Gloucestershire Council on proposed improvements to the Streamside Walk.	

Will Hallam and Alex Fraser provided an update on the plans for the Streamside Walk improvements, including items raised at the December meeting of the Climate and Nature Committee, namely:

- Use of a permeable surface – this is not possible due to budgetary constraints. The committee, therefore, asked that the surface used be laid in such a way that drainage is maximised.
- Lighting – there will be no lighting due to the potential disturbance to bat populations.
- Setting up of a Friends of Group – WH will send further information regarding this to the Committee via SG.
- Convening of a working group to co-design the improvements – this took place and comments have been incorporated into the design where possible.

The next stage is for a full business case to be submitted for the changes. It is possible work will start this summer.

The committee discussed the need for clearance of vegetation to be done sensitively and in a balanced way so as not to unduly disturb any resident wildlife and this was accepted by WH and AF.

CN2627.07 To consider a proposal to alter carbon calculations for 2026-27 to exclude the football club's consumption.

The Committee **RESOLVED** to alter carbon calculations to exclude the football club's consumption of electricity. Proposed by Cllr Rowe, seconded by Cllr Carter, unanimously agreed.

CN2627.08 To consider ideas for Watermark Town projects for 2026-27

The Committee **RESOLVED** to progress with the Watermark Town projects as recommended. Proposed by Cllr Bloor, seconded by Cllr Rowe, unanimously agreed.

CN2627.09 To consider concept design quotations and project phasing for the Memorial Woodland and Wellbeing Garden.

The Committee **RESOLVED** to recommend to Full Council that we appoint Company 2 to design the memorial woodland, as per their quotation. The Committee **NOTED** that the design will need to tie in the wider landscape, including improving connectivity with the Chapel. Proposed by Cllr Greenman, seconded by Cllr Carter, unanimously agreed.

CN2627.10 To consider the draft of the 2025-26 Carbon Report.

The Committee **NOTED** the draft of the 2025-26 Carbon Report. A minor amendment is needed to page 9, figure 5.6. Once completed, the report can be finalised and shared.

CN2627.11 To consider the draft of the TTC Decarbonisation Road Map.

The Committee **NOTED** the draft of the TTC Decarbonisation Road Map. They requested that a public-facing summary be prepared ahead of publication. The development of a climate change page on the TTC website was considered and will be developed.

The final version of the Road Map will be brought back to the Climate and Nature Committee meeting on 1 September ahead of sharing with Full Council. Thereafter, an update on progress against plan will be a standing agenda item at the Climate and Nature Committee.

CN2627.12 To consider the draft of the TTC Sustainable Purchasing Guidelines.

The Committee **NOTED** the draft of the TTC Sustainable Purchasing Guidelines. No amendments are required and these can now be published and shared with the wider council. SG explained to the Committee that many of the guidelines are already being adopted by officers.

CN2627.13 To consider the plans for a Tiny Forest.

Plans for a Tiny Forest were further considered and a new site, adjacent to the Crossways School playing field was suggested.

ACTION CN2627.13.01: SG to investigate new site feasibility, including potential availability of land for a Tiny Forest.

ACTION CN2627.13.02: DB to draft an email to share with schools requesting their participation in the project.

The Committee **NOTED** that it was unlikely, due to constraints relating to time, land availability and budget, that the project would be advanced this planting season, but requested that as much progress as possible be made on it in anticipation of progressing it in the 27-28 planting season.

CN2627.14 To note the plans for Communications and Events for 2026-2027.

The Committee **NOTED** the Communications and Events plan for 2026-2027. There was discussion about the Town Council potentially supporting a growers' event in future.

CN2627.15 To note the schedule for 2026-27 Climate and Nature Committee and Thriving Nature working group meetings.

The Committee **NOTED** the schedule for Climate and Nature and Thriving Nature working group meetings for 2026-27.

CN2627.16 To note that the deadline for submission of items for inclusion on the next agenda is Tuesday 18 August 2026.

The deadline for the submission of items for inclusion on the next agenda was **NOTED**.

CN2627.17 To note that the date of the next meeting of the Climate and Nature Committee is Tuesday 1 September at 19.30.

The date of the next Climate and Nature Committee was **NOTED**.

The next Thriving Nature working group takes place on Tuesday 28 July at 19.00.

Meeting concluded at 21.00.

DRAFT

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Decarbonisation Road Map and Recommended Measures

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Action



1. Detail

In 2021 Thornbury Town Council (TTC) declared a Climate and Nature (Ecological) emergency and in 2022 the Climate and Nature Committee was convened. The Council has been tracking its Greenhouse Gas emissions since 2022 and has made excellent reductions in its carbon output since then. This is in line with the Council's ambition to tackle the climate emergency by working with others in the area to help Thornbury become climate neutral by 2030.

At the meeting of the Climate and Nature Committee in December 2025, it was agreed that a road map outlining a clear plan for TTC to address its remaining emissions and become carbon neutral by 2030 was required (CN2526.33). As a result, the Climate and Nature Officer worked with committee members and other council officers to produce a fully detailed decarbonisation road map (see attached).

The decarbonisation road map incorporates all emissions generated directly by TTC operations. It does not include emissions generated in TTC's supply chain. It addresses energy consumption and other carbon-related factors on a site-by-site basis and includes a section on ancillary operations (for example, grounds maintenance). It makes recommendations for measures that can be implemented to help TTC achieve carbon neutrality by 2030.

TTC has already implemented effective measures to reduce emissions, resulting in a 50% reduction since 2022. Implementation of the recommended measures in the road map will result in a total 84% reduction from the 2022 emissions baseline by 2030.

If all measures recommended in the decarbonisation plan are implemented, a reduction of 13.84 tCO₂e should be experienced over the plan period (2026-2030). The remaining 7.08 tCO₂e of emissions will require insetting and/or offsetting.

A visual representation of the decarbonisation road map journey can be seen in Appendix 1.

Financial Costs

With regards to funding decarbonisation measures, the decarbonisation road map notes the following:

- Financial Payback Periods: Most recommended measures have payback periods of 5–10 years, showing long-term savings and environmental benefits.
- Primarily, improvements can be funded by savings made on energy consumption, via planned and preventative maintenance measures, and through planned projects (e.g., the Pavilion reconfiguration).

The total expected costs and savings (excluding ancillary operations) are detailed below:

Total Cost - £41,000*

Savings over 1 year - £6,971

Cumulative Savings over plan period - £20,573

Less offsetting cost (see below) - £2400

Net Cost - £22,827

* this figure represents spend in addition that already planned as part of existing projects and planned/preventative maintenance measures.

As the above details, whilst reductions in energy consumption over the plan period are expected to go a long way towards paying for decarbonisation measures, savings are realised over the long term. This means that upfront expenditure is required to realise longer-term savings (the spend to save principle).

The following measures, that will need to be funded over and above existing projects/planned maintenance/equipment replacement, are recommended in the decarbonisation road map:

2026-27 Financial Year

- Installation of low-velocity heat recirculation fans in the Council Chamber (£1,000)
- Improved pipe installation at the MPF (£1,200)
- Improved door insulation at the Chapel (£100)
- Total £2,300 (drawn from a combination of Climate and Nature and Facilities budgets – TBC - see paper for agenda item 5)

2027-28 Financial Year

- Heating zoning at the Town Hall (£8,000)
- Additional electric car charging points in machine store at MPF (£2,000)
- Energy efficiency measures at MPF (£3,200)
- Magnetic secondary glazing at the Chapel (£2,000)
- Installation of light sensors at the Chapel (£500)
- Total £15,700 (new spend)

2028-29 Financial Year

- Extended solar array at MPF (£15,000)
- Battery storage for solar energy at MPF (£8,000)
- Total £23,000 (new spend)

Vehicle Replacement/Ancillary Operations

We currently have several fossil-fuel powered vehicles that are not presently budgeted for replacement. The total cost of replacing the vehicles, where a viable electric-powered alternative exists, is estimated at £135,350. This cost should, however, be offset against the cost of replacing these vehicles with a fossil-fuelled equivalent (when they come to the end of their useful life). To replace these items with fossil-fuelled alternatives is estimated to cost £160,500, meaning that electric replacements will save £25,000 of capital spending. In addition, these vehicles will not require fuelling with fossil fuels, which is estimated to save a net £1900 per year. The net saving will increase as and when solar/other renewables installation and battery storage are completed at the MPF.

To minimise environmental impact, vehicles should continue to be retained until the end of their useful life. Vehicle emissions should, therefore, continue to be counted until they are replaced. As the recommendation is that current vehicles are run to the end of their current lifespan, there are no additional capital costs involved in the replacement of vehicles for decarbonisation purposes.

Residual emissions

Residual emissions will be dealt with by insetting (i.e., planting trees on TTC land) in the first instance. It is estimated that insetting will require the planting of approximately 265-300 trees. Plans already in place for the Memorial Woodland that will be planted adjacent to the cemetery are likely to include 400-500 trees, funded by the Forest of Avon and the DEFRA Trees for Climate fund. These will be planted by volunteers and Forest of Avon fund tree care for at least 5 years after planting. Therefore, there are no additional costs for insetting TTC's remaining emissions are anticipated.

It can, however, take up to 40 years for a tree to absorb 1 tCO₂e. Therefore, TTC may need to offset emissions while the woodland is maturing. It is estimated that offsetting would cost approximately £600 per year, amounting to a total of £24,000 over 40 years.

Climate resilience

The decarbonisation road map also recognises that climate change is already happening and that, alongside measures to reduce carbon emissions, TTC will need to consider how it can support Thornbury in becoming more climate resilient. This includes:

- Policy Alignment: Ensuring TTC's actions align with national and local policies.
- Resilience Planning: Incorporating flood risk management, sustainable landscaping, and energy-efficient building design to adapt to climate change impacts.
- Long-Term Vision: Becoming a model for sustainable community governance.

2. Implications

Environmental

TTC can further reduce its emissions and reach carbon neutrality via relatively low-cost capital spends. The environmental benefits of national/global decarbonisation include:

- Cleaner air.
- Reduced flood risk.
- Improved water security.
- Reduced risks from extreme weather.
- Sustainable living conditions for present and future generations.

Decarbonisation of TTC operations also offers TTC opportunities to:

- Become a community leader in decarbonisation, assisting residents and local businesses with their own decarbonisation journeys, conferring the benefits outlined above.

Financial

While the costs of decarbonisation measures are loaded into the decarbonisation plan period, the benefits stretch beyond the date of the plan, offering savings in the longer term.

The net cost of the decarbonisation measures outlined in the decarbonisation plan (excluding vehicle replacement) is £22,827 over the next 3 years. The longer-term savings from the decarbonisation measures recommended would offer a return on this investment within 5 years

of the plan's end date. This means that by 2035, TTC will be experiencing a net saving of £6100 per year (annual savings less £600 offsetting cost) due to decarbonisation/energy efficiency measures.

Please note that all carbon savings, costs and payback periods quoted in the decarbonisation roadmap and this paper are point in time estimates that are subject to change.

3. Recommendations

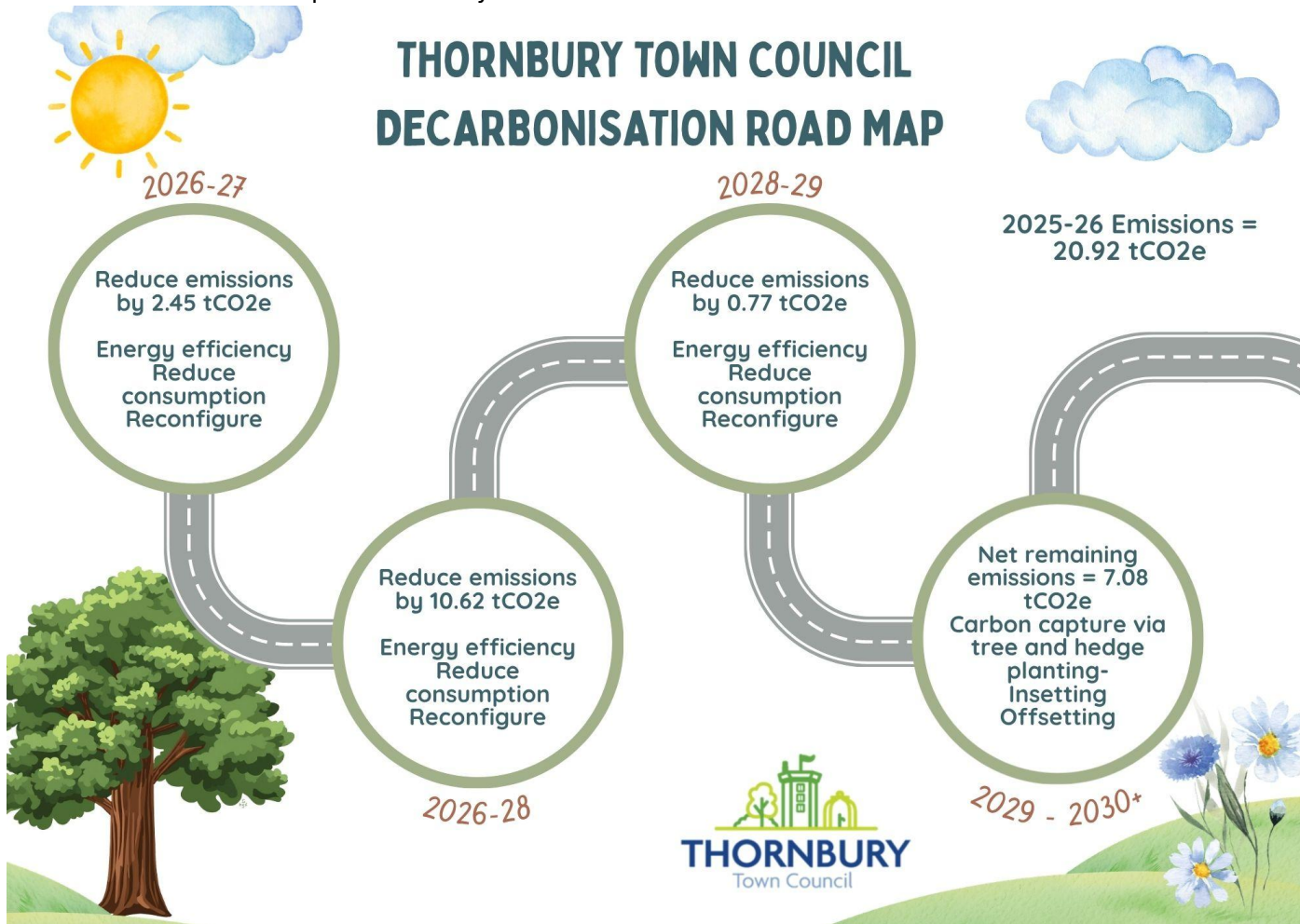
The Climate and Nature Committee is asked to:

- Review and approve the Decarbonisation Road Map and recommend its adoption to Full Council.
- Review the decarbonisation measures outlined in this paper and recommend to Full Council that provision for their delivery is included in Council budgets for 2027-28 and 2028-29.

Assuming the Climate and Nature Committee agree with these recommendations, a paper will be prepared for presentation at the Full Council meeting on 8 September.

4. Appendix

Decarbonisation Road Map for Thornbury Town Council





Decarbonisation Road Map and Communications Plan

Prepared by: Sharon Gardham (Climate and Nature Officer)

Date: August 2026

Version: v0.2

Contents

Glossary	4
1. Executive Summary.....	5
Figure 1.1: TTC Decarbonisation Road Map journey.....	7
Figure 1.2: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Scope	8
Figure 1.3: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Operational Area	8
Figure 1.4: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Timescale	9
2. Document Purpose	11
Figure 2.1: Potential Impacts of Climate Change.....	12
3. Scope, Intent and Method	13
Figure 3.1: Emissions Scope Examples	14
4. Stakeholder Analysis.....	15
Figure 4.1: Stakeholder Matrix.....	15
5. Approach.....	17
Figure 5.1: Decarbonisation Road Mapping Framework.....	17
6. Benefits and Opportunities	18
7. Emissions Recording – 2022 - 2026	19
Figure 7.1: Year on Year Emission Comparison Table	19
8. Milestones and Reporting.....	21
9. Decarbonisation Measures	22
9.1: Town Hall	22
Figure 9.1.1: Thornbury Town Hall, High Street, Thornbury	22
Figure 9.1.2: Town Hall Decarbonisation Plan	23
Figure 9.1.3: Town Hall Summary by Scope (with ‘big ticket’ items)	27
Figure 9.1.4: Town Hall Summary by Scope (without ‘big ticket’ items)	27
Figure 9.1.5: Town Hall Summary Timescale (with ‘big ticket’ items)	28
Figure 9.1.6: Town Hall Summary Timescale (without ‘big ticket’ items)	28
Figure 9.1.7: Return on investment summary (financial) of Town Hall Measures.....	28
Town Hall Recommendations and Comments.....	29
9.2: Mundy Playing Fields	30
Figure 9.2.1: Thornbury Town FC Pitch on a Match Day with Pavilion in Background	30
Figure 9.2.2: Mundy Playing Field Pavilion – Current Ground and First Floor Plans.....	31
Figure 9.2.3: Mundy Playing Fields Decarbonisation Measures	32

Figure 9.2.4: Mundy Playing Fields Summary by Scope (with ‘big ticket’ items)	39
Figure 9.2.5: Mundy Playing Fields Summary by Scope (without ‘big ticket’ items)	39
Figure 8.2.8: Return on investment summary (financial) of Mundy Playing Fields Measures	41
Mundy Playing Field Recommendations and Comments	42
9.3: Cemetery and Chapel	43
Figure 9.3.1: Thornbury Cemetery Chapel	43
Figure 9.3.2: Thornbury Cemetery Chapel Interior	43
Figure 9.3.3: Cemetery and Chapel Decarbonisation Measures	44
Figure 9.3.4: Cemetery and Chapel Summary by Scope	46
Figure 9.3.5: Cemetery and Chapel Summary by Timescales	46
Figure 9.3.6: Return on investment summary (financial) of Mundy Playing Fields Measures	46
Cemetery and Chapel Recommendations and Comments	47
9.4: Ancillary Operations	48
9.4.1: Vehicles and Equipment	48
Figure 9.4.1.1: Current Grounds Maintenance Equipment Running on Fossil Fuels	48
Figure 9.4.1.2: Ancillary Operations Summary by Scope	50
Figure 9.4.1.3: Ancillary Operations Summary by Timescale	50
9.4.2: Water Supply, Treatment, Waste Generated from Own Operations	50
9.5.3: Active Travel and Decarbonisation Leadership	52
Figure 9.5.3.1: Active Travel and Decarbonisation Leadership Initiatives	52
10. Funding Options and Payback Periods	54
Figure 10.1: Decarbonisation Funding Options for Town and Parish Councils	54
Figure 10.2: Decarbonisation Measure Costs and Savings – All Measures	55
Figure 10.3: Decarbonisation Measure Costs and Savings – Recommended Measures Only	57
11. Communications Approach and Plan	59
Figure 11.1: TTC Decarbonisation Roadmap Communications Plan	60
12. Climate Mitigation and Resilience	61
Figure 12.1: Climate Mitigation and Climate Resilience	61
12.1 Planning Policy and Consultation	63
12.2 Grounds Management	63
12.3 Landscape Design and Land Use	64
12.4: Building Design, Retrofit and Use	64
12.5: Working with others	64

Glossary

1.5° c: The maximum number of degrees of average global temperatures above pre-industrial levels (i.e., between 1850 and 1900) that must be achieved if catastrophic climate changes are to be avoided.

Carbon Credits: Tradable instruments that convey a claim for the removal or avoidance of GHG emissions.

Carbon Dioxide: A colourless gas that occurs naturally from industrial processes and other human activities.

Carbon Dioxide Equivalent (CO²e): A common scale for measuring the emissions from all greenhouse gases, presented as metric tonnes (t) or metric kilo tonnes (kt) (i.e., metric tonnes divided by 1000).

Carbon Footprint: Direct and indirect GHGs associated with a specific product or activity.

Carbon Sequestration: The process of storing carbon so that it doesn't enter the atmosphere and contribute to climate change.

Decarbonisation: or carbon reduction is the process of reducing the amount of GHG emissions an organisation produces.

Direct emissions: Emissions owned or controlled by an organisation.

Emissions: In this report, 'emissions' is used to refer to GHG emissions, measured in terms of carbon dioxide equivalents.

Fugitive emissions: Leak of gases caused by energy production.

Greenhouse Gases (GHG): Gases in the earth's atmosphere that trap heat, creating the greenhouse effect, leading to global temperature increases. These include carbon dioxide, methane and nitrous oxide.

Indirect emissions: Emissions resulting from an organisation's activities but controlled by others (e.g., when the organisation buys, uses and disposes of products).

Net Zero: is achieved when the amount of GHG emitted into the atmosphere because of an organisation's activities are counterbalanced by the removal of an equivalent amount (i.e., when emissions are 'cancelled out' by GHG removal or sequestration).

Net Zero Journey/Road Map: The plan and process for reaching net zero.

Insetting/Offsetting: The process of removing carbon/GHG from the atmosphere to balance out GHG emissions (i.e., to achieve net zero). Insetting refers to measures undertaken internally within an organisation. Offsetting is measures taken elsewhere. This may include purchasing carbon credits or carrying out sequestration activities (e.g., tree planting).

Scope 1 emissions: GHGs directly relating to an organisation's activities. For example, its consumption of gas for heating and fossil fuels for transportation and machinery.

Scope 2 emissions: GHGs generated by the production of purchased electricity.

Scope 3 emissions: Generally, value chain emissions generated up or downstream from an organisation because of its activities. For example, emissions in the supply chain, from waste disposal or transmission and distribution emissions for purchased electricity.

1. Executive Summary

This document outlines Thornbury Town Council's (TTC) strategic roadmap to achieve net zero emissions by 2030, aligning with the global goal of limiting warming to 1.5°C above pre-industrial levels. It provides a comprehensive plan for reducing greenhouse gas (GHG) emissions across all council operations, including buildings, grounds, vehicles, and ancillary activities, while fostering climate resilience and community engagement.

Overall Emissions

- TTC has already implemented effective measures to reduce emissions, resulting in a 50% reduction in emissions since 2022. Implementation of the recommended measures in this plan will result in a total 84% reduction in emissions by 2030. If 'big ticket' items* were included, this would result in an overall reduction of 94% in emissions from 2022 levels.

*'Big Ticket' items, for example heat pumps at the Town Hall, are included in this document for thoroughness, but their implementation is unlikely to be realistic by 2030 due to financial, technological and practical constraints. Headline calculations are therefore based on these measures not being implemented.

Reducing Emissions focuses on three main areas:

- Reducing TTC's reliance on fossil fuels (for example by replacing diesel vehicles with electric).
- Improving our renewable energy generation and storage.
- Reconfiguring and retrofitting buildings and operations to improve energy efficiency.

Reductions and Residual Emissions

- If all recommended measures are implemented, a reduction of 13.84 tCO₂e should be experienced over the plan period (2026-2030).
- 7.08 tCO₂e of remaining emissions will require insetting and/or offsetting. This will require planting of approximately 265-300 trees. While trees are maturing (which can take up to 40 years) TTC should investigate options for outsourcing offsetting.
- If 'big ticket' items were included, residual emissions would reduce to 2.58 tCO₂e.¹

Funding and Payback Periods

- Financial Payback Periods: Most recommended measures have payback periods of 5–10 years, showing long-term savings and environmental benefits.

¹ The Asian Forest Cooperation Organisation. <https://afocosec.org/act-main/>

- Primarily, improvements will be funded by savings made on energy consumption, via planned and preventative maintenance measures, and through planned projects (e.g., Pavilion reconfiguration).

Communications Plan

A multi-phase communications strategy is proposed to:

- Engage stakeholders through in person events, our website and social media.
- Promote transparency by sharing progress reports and milestones.
- Encourage community participation in active travel, energy-saving initiatives, and local climate projects.
- Leverage partnerships with schools, local organisations, and neighbouring councils to amplify impact.

Climate Resilience

- Recognising that climate change is happening despite measures being taken to avert it, this report also focuses on climate resilience in three areas:
 - Policy Alignment: Ensuring TTC's actions align with national and local policies.
 - Resilience Planning: Incorporating flood risk management, sustainable landscaping, and energy-efficient building design to adapt to climate change impacts.
 - Long-Term Vision: TTC aims to become a model for sustainable community governance.

Conclusion

- TTC's Decarbonisation Road Map provides a clear, actionable path to net zero by 2030. By combining technological upgrades, building reconfiguration and retrofitting, behavioural changes, and community engagement, the council can further significantly reduce its carbon footprint while creating a more sustainable, resilient, and equitable future for Thornbury.
- Headline figures are provided below in figures 1.1 – 1.4

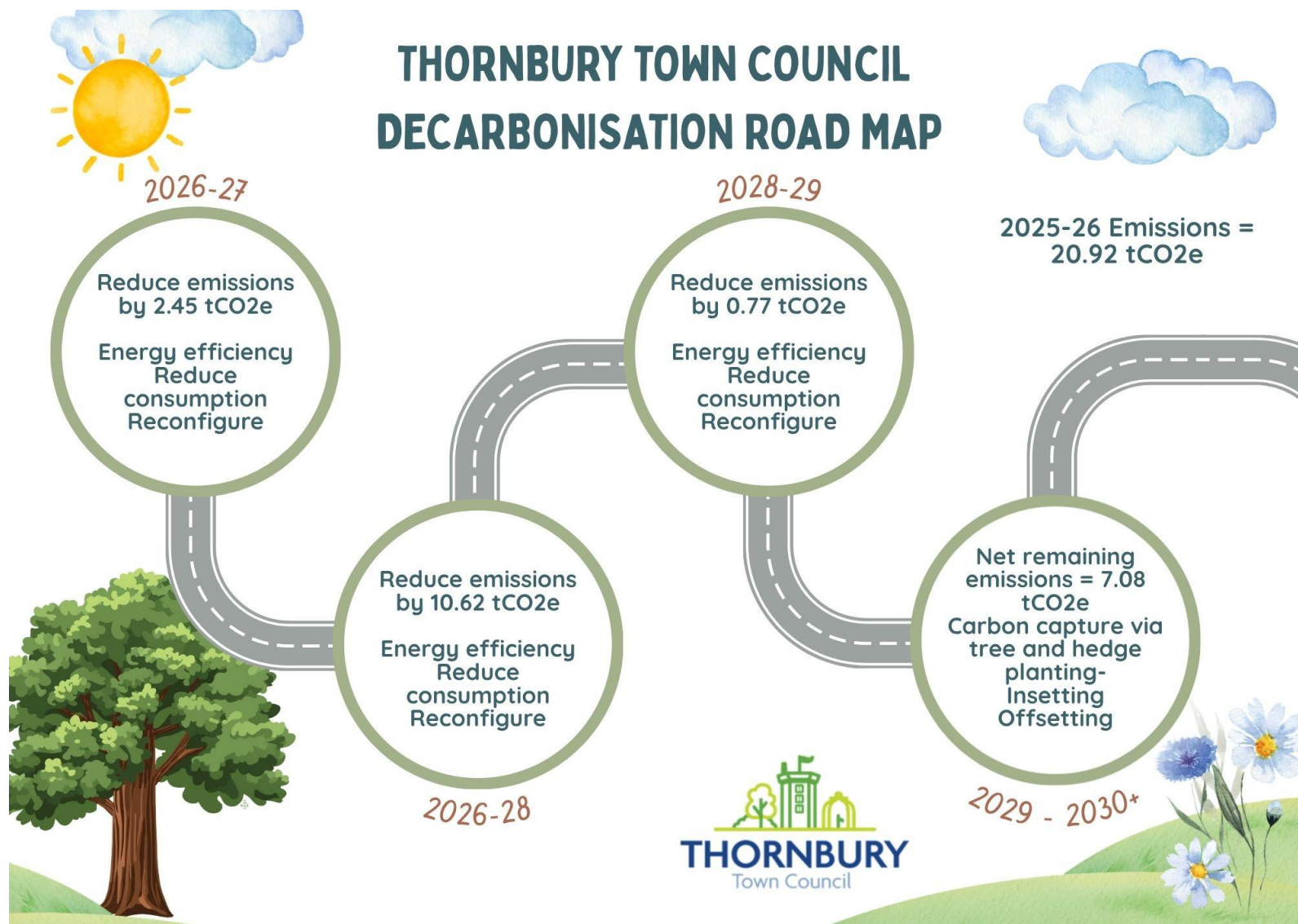


Figure 1.1: TTC Decarbonisation Road Map journey

Figure 1.2: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Scope

With 'big ticket' items			
Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
1	19.56	18.74	0.82
2	0	0	0
3	1.36	-0.4	-0.4
Total	20.92	18.34	2.58

Without 'big ticket' items			
Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
1	19.56	13.68	5.88
2	0	0	0
3	1.36	0.16	1.2
Total	20.92	13.84	7.08

Figure 1.3: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Operational Area

With 'big ticket' items				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Town Hall	1	11.85	11.85	0
Town Hall	2	0	0	0
Town Hall	3	1	-0.36	-0.36
Sub-total		12.85	11.49	-0.36
Mundy Playing Fields	1	2.6	2.47	2.47
Mundy Playing Fields	2	0	0	0
Mundy Playing Fields	3	0.3	-0.08	-0.08
Sub-total		2.9	2.39	2.39
Cemetery	3	0.07	0.04	0.04
Bakery Annexe	3	0	N/A	N/A
Ancillary Operations	1	5.1	4.42	0.68
Total		20.92	18.34	2.58

Without 'big ticket' items

Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Town Hall	1	11.85	8.51	3.34
Town Hall	2	0	0	0
Town Hall	3	1	0.01	0.99
Sub-total		12.85	8.52	4.33
Mundy Playing Fields	1	2.6	0.75	1.85
Mundy Playing Fields	2	0	0	0
Mundy Playing Fields	3	0.3	0.11	0.19
Sub-total		2.9	0.86	2.04
Cemetery	3	0.07	0.04	0.03
Bakery Annexe	3	N/A	N/A	N/A
Ancillary Operations	1	5.1	4.42	0.68
Total		20.92	13.84	7.08

Figure 1.4: TTC Decarbonisation Road Map – Reductions and Residual Emissions by Timescale

With 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	Town Hall	12.85	0.22	12.63
Short (2026-27)	MPF	2.9	0.31	2.59
Short (2026-27)	Cemetery	0.07	0.01	0.06
Short (2026-27)	AO	5.1	1.91	3.19
Sub total		20.92	2.45	18.47
Medium (2027-28)	Town Hall	12.63	8.3	4.33
Medium (2027-28)	MPF	2.59	0.39	2.2
Medium (2027-28)	Cemetery	0.06	0.03	0.03
Medium (2027-28)	AO	3.19	1.9	1.29
Sub total		18.47	10.62	7.85
Long (2028 - 2030+)	Town Hall	4.33	2.97	1.36
Long (2028 - 2030+)	MPF	2.2	1.69	0.51
Long (2028 - 2030+)	Cemetery	0.03	0	0.03
Long (2028 - 2030+)	AO	1.29	0.61	0.68

Sub total		7.85	5.27	2.58

Without 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	Town Hall	12.85	0.22	12.63
Short (2026-27)	MPF	2.9	0.31	2.59
Short (2026-27)	Cemetery	0.07	0.01	0.06
Short (2026-27)	AO	5.1	1.91	3.19
Sub total		20.92	2.45	18.47
Medium (2027-28)	Town Hall	12.63	8.3	4.33
Medium (2027-28)	MPF	2.59	0.39	2.2
Medium (2027-28)	Cemetery	0.06	0.03	0.03
Medium (2027-28)	AO	3.19	1.9	1.29
Sub total		18.47	10.62	7.85
Long (2028 - 2030+)	Town Hall	4.33	0	4.33
Long (2028 - 2030+)	MPF	2.2	0.16	2.04
Long (2028 - 2030+)	Cemetery	0.03	0	0.03
Long (2028 - 2030+)	AO	1.29	0.61	0.68
Sub total		7.85	0.77	7.08

2. Document Purpose

Since widespread industrialisation took place in the 19th century, particularly in the global north, human consumption of fossil fuels (oil, gas and petroleum) and the industrialisation of agriculture have increased the volume of carbon, methane and nitrous oxide (greenhouse gases - GHG) in the Earth's atmosphere. GHGs effectively 'trap' heat in the atmosphere, resulting in increasing average global temperatures. A rapidly warming climate impacts all of Earth's systems, increasing the likelihood of extreme weather events, altering ecosystems beyond species' ability to adapt, and endangering human and other-than-human life across the planet.

To counteract this, international legal agreements have been reached to try and limit the increase in global average temperatures to 1.5 degrees Celsius above pre-industrial levels by 2050. While urgent global and national actions are vital for achieving this goal, local action is also essential.

Reflecting the need for local action, in 2021 Thornbury Town Council (TTC) declared a Climate and Nature (Ecological) emergency and in 2022 the Climate and Nature Committee was convened. The Council has been tracking its GHG emissions since 2022 and has made excellent reductions in its carbon output since then. This is in line with the Council's ambition to tackle the climate emergency by working with others in the area to help Thornbury become climate neutral by 2030. Estimates suggest that in 2023, South Gloucestershire emitted 1579.5 ktCO²e. Thornbury was responsible for approximately 79.5 ktCO²e or 79,500 tonnes of CO²e (5%).²

Some decarbonisation actions have already taken place across several TTC sites. However, there is no comprehensive plan or approach to decarbonisation and therefore no clear sight of whether achieving net zero by 2030, even when limiting this ambition purely to TTC operations, is feasible. This document's aim is to fill that gap, thereby:

- Allowing the size of the remaining net zero challenge to be more clearly understood.
- Enabling a consistent, prioritised plan for emissions reduction across sites.
- Giving a clearer picture of the time and money required to achieve net zero for TTC's operations.
- Providing a way of more clearly tracking progress and measuring the success of our actions.
- Identifying any remaining emissions after all practicable actions have been taken so that mitigation can be considered.
- Outlining how TTC can share its decarbonisation journey with the wider town, thereby encouraging carbon reduction across the area.

The latest scientific research indicates that the world is likely to exceed or very quickly breach the 1.5-degree target in the next 20 years. Given this, consideration in this road map will also be given to climate resilience, or how TTC and the wider town will need to adapt to a rapidly changing climate and the inevitable challenges this will bring. The following graphic depicts the range of impacts that may be experienced due to our changing climate.

² National Atmospheric Emissions Inventory, South Gloucestershire, 2023, [<https://naei.energysecurity.gov.uk/laghgapp/>].

Impacts of Climate Change

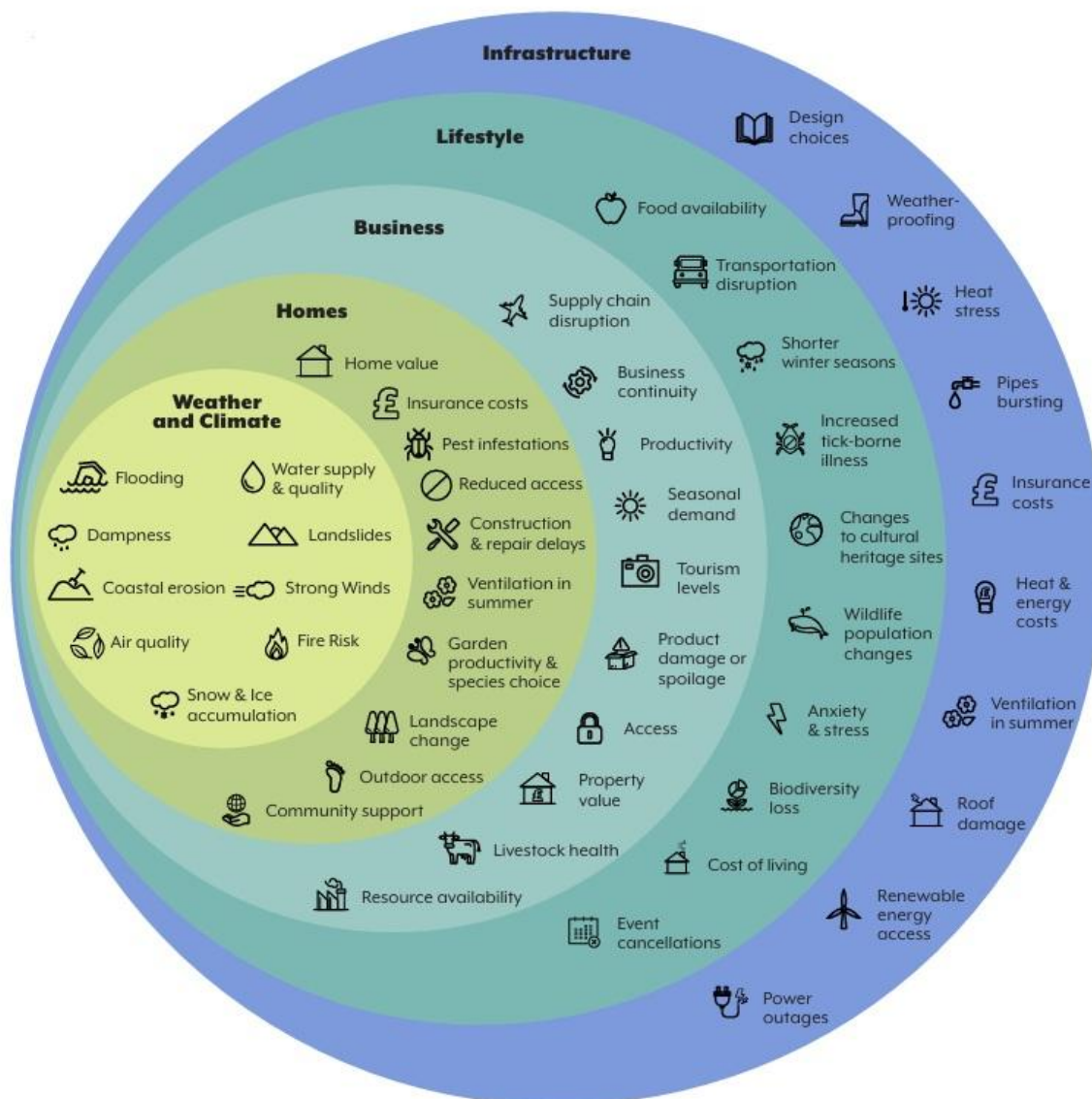


Figure 2.1: Potential Impacts of Climate Change

Source: The Highland Council, Net Zero Strategy, <https://www.highland.gov.uk/downloads/download/495/net-zero-strategy>

3. Scope, Intent and Method

The intention of this report is to provide a clear and realistic road map for achieving net zero in TTC's operations. It will articulate how the Council's decarbonisation journey will be communicated to a wider audience with the goal of encouraging and supporting town-wide decarbonisation. It will also begin to outline what climate adaptations and mitigations may be needed in TTC's operations to cope with global heating exceeding 1.5 °c above pre-industrial levels in the next 20 years.

Figure 3.1 provides a visual representation of the different scope emissions. For the purposes of this report, the following emissions are in scope:

- Scope 1: Direct emissions from TTC operations (e.g., buildings, land use, TTC Fleet vehicles and equipment).
- Scope 3: Water consumption, waste generated from own operations, transmission and distribution emissions from electricity consumption.

The following are out of scope of this report:

- Scope 1: Emissions from the wider town/county, including transportation, domestic housing, agriculture and land use, etc. Whilst these are out of scope of this report, the communications plan in [Section 11](#) will outline how we intend to communicate our decarbonisation journey and how this, alongside the wider activities of the Climate and Nature Action Plan, will support and encourage decarbonisation in the wider town/area.
- Scope 2: Electricity used by TTC is either generated on-site via solar arrays at the Town Hall and Mundy Playing Fields or is provided by a 100% renewable energy supplier (Octopus). As such, emissions from electricity are not included in the report. Should a decision be made to move away from a renewable energy supplier, this report would need to be revisited and updated.
- Scope 3: Emissions generated in the supply chain by purchased goods and services. Whilst these are out of the scope of this report, the sustainable purchasing and procurement guidelines seek to reduce TTC's environmental harm from its consumption of goods and services and should therefore be viewed as complimentary to this report.

Emissions from the wider town/county, including residents' consumption of goods and services or travelling beyond our area boundary. Again, whilst these are out of the scope of this report, the communications plan in Section 10, and the wider activities of the Climate and Nature Action Plan, supports the decarbonisation of the wider town/area.

In addition to the above, the Bakery Annexe on the High Street has been excluded from this report. The use of this building is being phased out, and the future of the site is not determined. If TTC decides to repurpose or rebuild on this site, an assessment of its impact on TTC's net zero targets should be carried out.

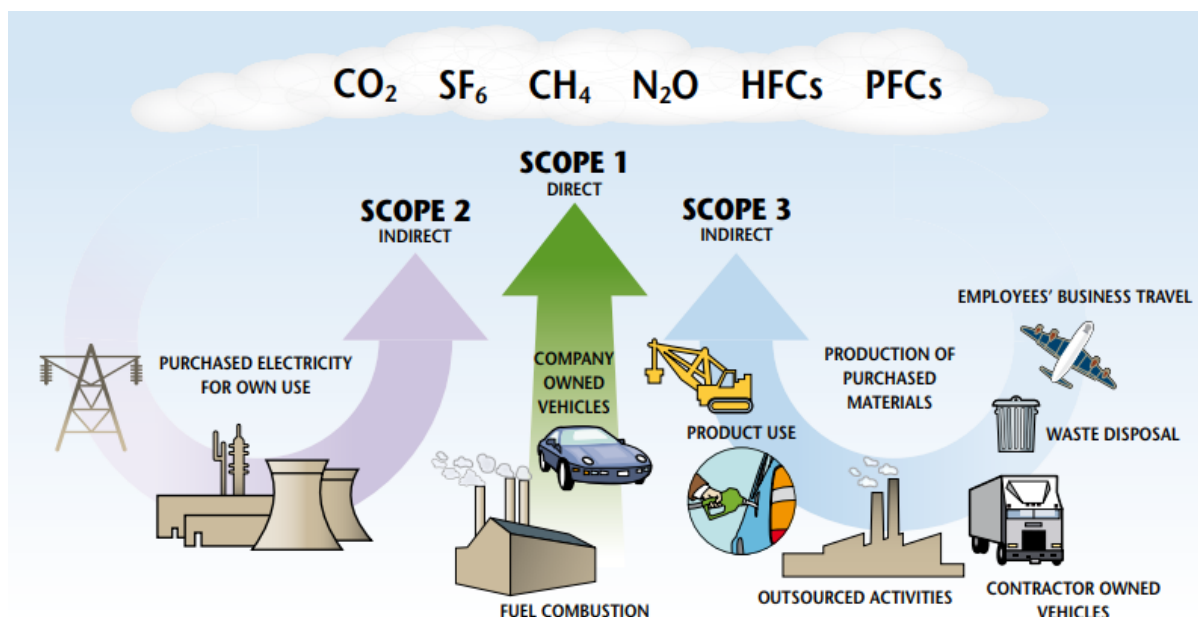


Figure 3.1: Emissions Scope Examples

Source: University of Michigan

The carbon emissions figures used in this report are calculated by applying conversion factors provided by the Department for Business, Energy & Industrial Strategy (BEIS) to TTC's consumption data for 2025-26. Emissions are reported as tCO₂e (carbon dioxide equivalent).

The baseline tCO₂e figures used are from the 2025-26 carbon report for Thornbury Town Council, which can be found here [insert link to website page].

Costs, energy savings and tCO₂e savings have been estimated via a desktop exercise. As and when measures additional to planned projects or maintenance are progressed, more accurate figures will be obtained and presented in officer papers to the relevant council committees.

Full calculations and calculation logic can be requested by emailing climateandnature@thornburytowncouncil.go.uk.

4. Stakeholder Analysis

Internally to TTC, the following committees are most concerned with the decarbonisation road map:

- Climate and Nature Committee
- Finance and General-Purpose Committee
- Full Council Committee

Hierarchically, the recommendations from this document will be reviewed by the Climate and Nature Committee. Accepted recommendations will be passed on to the relevant committee (F&GP and/or Full Council) depending on their nature.

While the whole document will be reviewed and passed to the relevant committees for recommendation and approval, individually costed measures will be recommended for inclusion in budgets in line with the usual processes and the Financial Regulations.

Council officers have been involved in the decarbonisation journey to date. Further measures, as detailed in this document, will be socialised with officers as relevant and necessary. Levels of interest will vary depending on roles and responsibilities.

Engagement with the wider community will be detailed in the communication and engagement plan in Section 10.

Figure 4.1: Stakeholder Matrix

Stakeholder Group	Interests	Potential Concerns	Influence	Impact	Engagement Approach
Town Councillors	Credible climate action; financial stewardship; positive public response	Costs, risks, public reaction, deliverability	High	High	Papers to Climate and Nature Committee, Finance and General-Purpose Committee and Full Council.
Council Officers & Staff	Practical operations; improved efficiency	Disruption; training needs, costs	High	High	Early involvement; training; clear procedures
Building Users	Comfort; reliability; cost	Disruption during works; Practical use of facilities	Medium	High	Direct updates; clear timelines
Contractors	Clear scopes; stability	Timeline conflicts	High	High	Early involvement; clear briefs

Thornbury Town Council Decarbonisation Road Map & Communications Plan

South Gloucestershire Council	Alignment with climate goals; funding	Coordination; timelines	Medium	Medium	Sharing of advice and information.
Residents	Lower bills; climate action	Spending concerns; amenity changes	Medium	High	See communication plan (section 10)
Local Businesses	Cost savings; local reputation	Disruption; unclear benefits	Medium	Medium	See communication plan (section 10)
Community Groups	Climate progress; collaboration	Slow progress	Medium	Medium	See communication plan (section 10)
Schools & Youth Groups	Education; youth initiatives	Capacity constraints	Medium	Medium	See communication plan (section 10)
Faith Groups	Community wellbeing; stewardship	Retrofit costs	Medium	Medium	See communication plan (section 10)
Local Media	Local stories; updates	Access to information	Medium	Medium	See communication plan (section 10)
Visitors & Commuters	Well-maintained spaces	Low engagement	Low	Low-Medium	See communication plan (section 10)

5. Approach

This document takes an operational approach to planning for net zero, as detailed in figure 5.1 below.



Decarbonisation Road Mapping Framework

Capital Strategy/Sustainable Purchasing Guidelines

Site/Operation	Town Hall	Cemetery and Chapel	Mundy Playing Fields	Bakery Annexe/67 High Street*	Ancillary Operations (e.g., mowing, maintenance)
Decarbonisation Measures	Buildings	Fixtures and Fittings	Machinery	Vehicles	Training and Behavioural Change
Emission Types	Heating (Scope 1 Emissions)	Electricity (Scope 2 Emissions)	Water & Waste Water (Scope 3 Emissions)	Waste (Scope 3 Emissions)	Fuel (Scope 1 Emissions)

* Operations at the Bakery Annexe are ceasing. Therefore, it has been excluded from this Road Map. Scope 2 emissions for electricity have been excluded (see section 3 above)

Figure 5.1: Decarbonisation Road Mapping Framework

6. Benefits and Opportunities

The direct benefits of decarbonisation of TTC operations are:

- Reduced carbon emissions, supporting the TTC ambition to achieve net zero by 2030.
- Cost savings resulting from reduced energy and materials consumption.
- Increased energy security.
- Becoming more climate resilient, with an enhanced ability to withstand climate-change related shocks.

Decarbonisation of TTC operations also offers TTC opportunities to:

- Become a community leader in decarbonisation, assisting residents and local businesses with their own decarbonisation journeys, conferring the benefits outlined above.
- Raise the profile of TTC within the wider community of local authorities.
- Become a decarbonisation leader, opening opportunities for gaining funding support beyond the precept.

In general, decarbonisation offers the following benefits to the wider community:

- Cleaner air.
- Lower living costs.
- Reduced flood risk.
- Improved water security.
- Reduced risks from extreme weather.
- Sustainable living conditions for present and future generations.

7. Emissions Recording – 2022 - 2026

TTC has been calculating and recording its emissions since 2022. The table below summarises the reductions already experienced because of actions taken to decarbonise operations. Full details of these calculations, the methodology used, and their breakdown by site/operation are available in the respective year's carbon reports.

Figure 7.1: Year on Year Emission Comparison Table

Emission Type	2022-23	2023-24	2024-25	2025-26	Total % reduction 2022-23 to 2025-26 (including electricity)	Total % reduction 2022-23 to 2025-26 (excluding electricity)
Scope 1	28.82	19.16	21.73	19.56	32.13%	32.13%
Scope 2	6.31	6.17	8.22	0.00/4.28†	32.17%	100.00%
Scope 3	7.02	2.49	2.57	1.36	80.63%	80.63%
TOTAL	42.15	27.83	32.52*	20.92	40.21%	50.37%

* The increase in electricity emissions between 2023-24 and 2024-25 was largely driven by the installation of Thornbury Football Club's bar area at the Mundy Playing Fields pavilion.

† Two figures are given here. 0.00 represents the removal of electricity emissions from carbon reporting due to the Council's use of renewable energy. 4.28 is the net consumption of electricity, including a 50% reduction used in 2025-26 reporting for the electricity consumption of the Football Club at the MPF.

Figure 7.2: Actions Already Taken to Decarbonise TTC Operations

Actions already taken to decarbonise include:

Operation	Years	Action Taken
Town Hall	2022-23	Installation of LED Lighting
	2022-23	Installation of solar panels
	2023-26	Behaviour changes (switching off appliances, turning down radiators, closing curtains in chamber, etc.)
	2024-25	Improved insulation in loft space
	2024-25	Installation of secondary double glazing (partial)
	2024-25	Installation of radiator reflectors
	2024-25	Ventilation timer controls
	2024-25	Apex roof insulation
	2025-26	Cleaning of solar panels
	2025-26	Installation of magnetic secondary double glazing (partial)
	2025-26	Installation of valve jackets in boiler room
	2025-26	Installation of chimney sheep in volunteer link room
	2025-26	Installation of water immersion heater timer
	2023-24	Conversion of diesel vehicle to electric vehicle
Ancillary Operations	2022-26	Replacement of some fossil fuelled equipment with battery powered equipment

Thornbury Town Council Decarbonisation Road Map & Communications Plan

All sites/operations	2024-26	Reduced mowing regime and removal of some areas from regular mowing
	2022-26	Increase in tree cover and hedgerow planting
	2022-26	Increase in recycling, reduction in waste
	2022-26	Conscious buying decisions to switch (where practicable) to environmentally friendly options

8. Milestones and Reporting

TTC has a target to reach net zero by 2030. What this means in practice, is that once all practicable measures have been taken to decarbonise TTC's operations, there will be a remaining carbon balance that will need to be either inset or offset to reach net zero. Various offsetting schemes are available, but the recommendation is that, in the first instance, TTC carries out inseting on its own land to offset carbon (for example via tree or hedge planting). Once inseting opportunities have been exhausted, it should work with a local charity or similar UK-based group to offset its remaining carbon.

It is worth noting that inseting or offsetting via tree planting etc. is not an instantaneous solution. Offsetting purchase may be required in the short term to compensate for the residual emissions while trees and hedges planted establish.

Decarbonisation measures are listed against each site as short-, medium-, and long-term. For the purposes of this report, these timescales are defined as follows:

- Short – Delivery at end of 2026-27 financial year
- Medium – Delivery at end of 2027-28 financial year
- Long – Delivery at end of 2028-2029+ financial year (net zero target date)

There may be measures that will be delivered beyond 2030. In such cases, inseting or offsetting will be required until the carbon saving from the relevant decarbonisation measure is realised.

There will also be changes to operations during these timescales which will have a negative or positive impact on carbon emissions (for example, increased use of the chapel increasing emissions or reduced mowing regimes reducing emissions). As such, the figures quoted in this document should be viewed as point in time. Dynamic calculations and flexibility in the measures required to address TTC carbon emissions is therefore required.

Carbon reporting measuring progress against this decarbonisation plan will be carried out at the end of each financial year. Interim reports on progress on the delivery of decarbonisation measures will take place every two months as a standing agenda item at the Climate and Nature Committee.

9. Decarbonisation Measures

9.1: Town Hall

Thornbury Town Hall was built in the late 18th century as a residential dwelling, before being converted to a police station and courthouse in 1860. There has, however, been a recorded building on this site since at least 1590. The building was acquired by Thornbury Town Council in the 1990s and was subsequently converted to offices and meeting rooms. There are separate offices at the rear of the building which are reached via a discreet entrance. These are rented out to a third party, but services such as heating, electricity and water are shared with the main Town Hall building. The current building is of an historic nature and is Grade II listed. It occupies a prominent place at the centre of the High Street. As such, it comes with

several challenges in terms of retrofitting it for the purpose of achieving significantly reduced emissions.



Some energy efficiency measures have already been put in place at the Town Hall, resulting in a good reduction in energy use since the 2022 baseline was set. The remaining measures that should be considered for implementation are listed below, along with estimated costs, energy cost savings and carbon savings.

Figure 9.1.1: Thornbury Town Hall, High Street, Thornbury
Source: Wikipedia

Figure 9.1.2: Town Hall Decarbonisation Plan

Ref.	Proposed Measure	Location	Timescale	Rationale/Notes	Estimated Cost (additional measures only)	Estimated Energy Saving (KwH per year)	Energy cost (per KwH) Gas or Electricity as relevant (£)	Potential Cost Saving per year (£)	Carbon Saving (tCO ² e)
TH1	Installation of low velocity heat recirculation ceiling fans in the Council Chamber	Town Hall	Short	The council chamber has a high apex ceiling and is only partially insulated. It is also infrequently used. These factors result in it being one of the less energy efficient areas of the Town Hall, as identified in an Energy Efficiency report compiled by Severn Wye in January 2024. Options for improving the thermal efficiency of the chamber are limited by the room's design, historical features and use considerations. Low velocity heat recirculation fans would prevent heated air from rising and collecting in the apex of the room, instead forcing it back down into the area it is needed. This would result in an estimated 30% thermal efficiency improvement in the chamber.	£1000	1178	£0.08	£94	0.22

Thornbury Town Council Decarbonisation Road Map & Communications Plan

TH2	Separation of heating systems - Town Hall and rented offices	Town Hall	Medium	At present, the occupants of the rented offices are using the building 24/7. As the heating and hot water systems are currently linked, this means the main Town Hall must be heated 24 hours per day, 7 days per week, despite being used only during office hours. During the colder months, the heating is therefore on for 168 hours per week over 24 weeks, or for 4032 hours per year. This results in 78% of the building being heated outside of office hours unnecessarily. Separating the two systems would result in significant savings. Heating the main Town Hall Monday to Friday, from 7am to 7pm would reduce heating hours by 108 per week for the main building. Assuming heating is used for 24 weeks of the year, this could reduce heating in the main Town Hall by 2592 hours per year, or by 64%. Installing thermostatic radiator valves that are controlled via a smart system would be a relatively low cost and low impact option for separating the heating systems. Room thermostats could also be installed with minimum invasive work. This would also allow less frequently used rooms to be controlled separately. The cost figures here are based on a quotation received for such a system in Feb 2024 with an uplift of c. £700 applied for increased costs in the interim period.	£8,000.00	41157	£0.08	£3292.57	7.53
-----	--	-----------	--------	---	-----------	-------	-------	----------	------

Thornbury Town Council Decarbonisation Road Map & Communications Plan

TH3	Installation of fully double-glazed replacement window units and/or secondary double glazing	Town Hall	Medium	Around 25% of the Town Hall's windows have fully installed secondary double glazing. The windows in the council chamber have wooden-framed secondary glazing. The remaining windows (excepting those in the public toilets) have magnetic Perspex secondary double glazing. Whilst magnetic secondary glazing improves thermal performance by around 30% over single glazed windows alone, it is not as efficient as fully fitted secondary or double glazing. Converting all windows to fully double-glazed units would require listed building planning permission, which is unlikely to be granted on the most prominent faces of the building. It is not therefore considered a viable option in the short or medium term. Some windows, such as those in the over 60s tearoom, have listed shutters, meaning fully fitted secondary glazing is not viable. In these cases, the existing magnetic secondary glazing is considered the most viable option. Converting the remaining magnetic secondary glazed windows to fully fitted secondary glazed windows would reduce heat loss by a further 30% in these areas. Savings are based on a 30% improvement in thermal efficiency in 60% of the building	£0	4167	£0.08	£333.36	0.76
TH4	Installation of lighting sensors/automatic lighting	Town Hall	Medium	At present, all lighting at the Town Hall is controlled via wall switches. Lighting is generally switched off outside office hours or when rooms are not in use. However, the installation of sensors would ensure lighting is only used when actually needed. Savings are based on a 5% reduction in electricity costs resulting from the installation of sensors	£0	642	£0.28	£179.76	0.01

Thornbury Town Council Decarbonisation Road Map & Communications Plan

TH5	Replacement of gas central heating at Town Hall with gas alternative	Town Hall	Long	At present, heat pump options for the Town Hall are limited. A system that is sufficient in size and capacity for the entire building is likely to be expensive and require a large amount of retrofitting. Radiators and pipework would likely need to be upgraded. Once installed, there may be slightly higher costs to run a heat pump system, but it is more efficient at converting energy input to energy output, so these additional costs should not be significant. Installation of heat pumps would remove the need for gas consumption at the Town Hall, thus eliminating these scope 1 emissions.	£70,000.00	Replace gas usage with electricity	£0.08 (Gas) £0.28 (Electricity)	£1518.72 (Gas) -£5600.00 (Electricity) -£4082 (net)	3..17
-----	--	-----------	------	---	------------	------------------------------------	------------------------------------	--	-------

Figure 9.1.3: Town Hall Summary by Scope (with 'big ticket' items)

Town Hall with 'big ticket' items				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Town Hall	1	11.85	11.85	0
Town Hall	2	0	0	0
Town Hall	3	1	-0.36	1.36
Total		12.85	11.49	1.36

Figure 9.1.4: Town Hall Summary by Scope (without 'big ticket' items)

Town Hall without 'big ticket' items				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Town Hall	1	11.85	8.51	3.34
Town Hall	2	0	0	0
Town Hall	3	1	0.01	0.99
Total		12.85	8.52	4.33

Figure 9.1.5: Town Hall Summary Timescale (with 'big ticket' items)

Town Hall with 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	Town Hall	12.85	0.22	12.63
Medium (2027-28)	Town Hall	12.63	8.3	4.33
Long (2028 - 2030+)	Town Hall	4.33	2.97	1.36

Figure 9.1.6: Town Hall Summary Timescale (without 'big ticket' items)

Town Hall without 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	Town Hall	12.85	0.22	12.63
Medium (2027-28)	Town Hall	12.63	8.3	4.33
Long (2028 - 2030+)	Town Hall	4.33	0	4.33

Figure 9.1.7: Return on investment summary (financial) of Town Hall Measures

Measure Ref.	Cost	Return on Investment – Financial (Years)
TH1	£1,000	11
TH2	£8,000	2
TH3	£7,000 (PPM)	21
TH4	£2,500 (PPM)	14
TH5	£70,000	46

Town Hall Recommendations and Comments

Balancing the cost of installation (carbon and financial) against savings (carbon and financial), the recommendation is that measures TH1 – TH2 are progressed as a priority. TH3 and TH4 should be considered as an option during routine maintenance as part of the Planned Preventative Maintenance (PPM) schedule.

At present, TH5 is not recommended, due to the high financial cost, the degree of retrofitting it would require and the negative impact it would have on electricity consumption. Furthermore, the current gas-fired boiler was only installed in 2021 and as such has a useful life that extends beyond the life of this road map. However, the recommendation not to proceed with heat pump installation should be reviewed as non-gas heating system technology develops, particularly for commercial and/or historic buildings and as and when additional renewable electricity generation is a viable option at the Town Hall. Additionally, funding and grant options should be kept under review to see if financial assistance becomes available for retrofitting commercial, public and/or historic buildings. TH1 – TH3 will need to be fully implemented before any alternative heating solution is considered.

It should be borne in mind, however, that a continuing reliance on gas central heating at the Town Hall leaves TTC vulnerable to disruptions to energy supplies caused by geopolitical or climate-related factors, as well as uncontrolled cost increases for gas. Furthermore, the current system heating does not offer a solution for cooling the building, which may impact the ability of TTC to function in extreme heat conditions. Both factors may render the current solution unfit for purpose in the coming years.

9.2: Mundy Playing Fields

The Mundy Playing Fields, which are located just off the main High Street, were gifted to the people of Thornbury by Mrs Violet Mundy in 1937. They are the largest single recreational area in Thornbury and comprise a children's play area, outdoor gym, football pitches, a pavilion, public toilets, picnic areas, tennis courts and grassed areas. There are recently planted wildflower areas, native hedges and trees, alongside more established trees and shrubs. There is a stream running through the site, which is partly culverted, as well as several drainage ditches which provide good potential for wildlife connectivity. The playing fields are used for public recreation, as well as large events such as the annual fireworks and carnival. The weekly Park Run takes place on the site. There are current projects being planned or underway to upgrade the water and sewerage systems, install a Multi-Use Games Area (MUGA), refurbish the pavilion, and put in a natural water play feature which will include de-culverting the stream.



Thornbury Town Football Club play their home matches on the site and run several grassroots teams for younger players. They operate a bar in the pavilion and use home, away and officials changing rooms and toilets. As the team have successfully moved up through the football leagues, they have upgraded some ground facilities (stands, fencing) in line with Football Association requirements. Thornbury Town FC also have a container storage unit on site.

TTC uses the upstairs area of the pavilion as an office, rest room and drying area for grounds maintenance staff. There is a TTC storage container and a recently erected machine store. The pavilion building was constructed from the 1970s onwards and its layout and facilities have not evolved in line with the increased and changing uses made of it. As such, there is an early-stage plan to upgrade the pavilion facilities. Plans of the current pavilion layout can be seen in Figure 9.2.2 below.

Figure 9.2.1: Thornbury Town FC Pitch on a Match Day with Pavilion in Background

Source: Thornbury Town Football Club



Figure 9.2.2: Mundy Playing Field Pavilion – Current Ground and First Floor Plans
Source: View Architects

Figure 9.2.3: Mundy Playing Fields Decarbonisation Measures

Ref.	Proposed Measure	Location	Rationale/Notes	Timescales	Estimated Cost (additional measures only)	Estimated Energy Saving (Kwh per year)	Energy cost (per kWh) Gas or Electricity as relevant	Potential Cost Saving per year	Included in maintenance or redevelopment plan?
MPF1	Improved pipe insulation	Plant room/Boiler Room	A thermal efficiency survey of the Town Hall demonstrated the volume of heat lost through uninsulated pipes and pipe joints. Presently, the pipes at MPF are inconsistently and/or poorly insulated or not insulated at all. Pipe insulation could be quickly installed relatively cheaply. Hot water efficiency could be immediately improved by around 10%.	Short	£1,200.00	1352	£0.08	£108	No
MPF2	Installation of radiator reflectors in upstairs staff area	TTC Staff Area	Heating in the upstairs staff quarters is used throughout the year (see MPF4). Radiator reflectors could be installed without cost (spare reflectors are left over from TH installation) and would result in an improvement in	Short	£0.00	304	£0.08	£24.32	No

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			thermal efficiency of 5%.						
MPF3	Improved ceiling insulation	TTC Staff Area	The current state of insulation in the staff area is unknown. Investigations should be carried out and insulation improved where it is inadequate. This will immediately improve the thermal efficiency in the staff area by an estimated 15%.	Medium	£500	890	£0.08	£71.20	TBC
MPF4	Separation of staff drying room from main staff area	TTC Staff Area	At present, the main staff drying room (for clothing, boots, etc.) is in the first floor flat. Its heating is linked to the gas system for the whole flat, meaning that when it is required, which can be year-round, the whole flat has to be heated. Separating the drying room from the main staff quarters would allow it to be independently heated, thereby reducing overall energy consumption	Medium	£0	1550	£0.08	£124.00	Yes

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			in the staff area. Based on an 80% reduction in heating need on 29% of heating days.						
MPF5	Advice to football club re: reducing energy consumption - for example, insulating jackets for kegs, putting fridges on bluetooth controlled timers, ensuring fridges are full at all times, empty fridges are switched off, etc.	Thornbury FC bar and kitchen	Currently, the football club bar area has drinks cooling equipment running 24/7, 365 days per year. Reducing use of the bar cooling fridges and equipment to just days when the bar is used would remove need for cooling on an estimated 240 days per year, resulting in a 66% decrease in energy consumption. This is a best practice measure that will not result in any direct	Short	£0.00	N/A	N/A	£2027 – this is the estimated current excess cost to TTC	Yes

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			savings (carbon or financial) for TTC.						
MPF6	Installation of false ceilings	Officials change Away change Public Toilets	At present, the home, away and officials changing rooms and the public toilets have uninsulated apex ceilings. Any heating in these areas rises to the apex, making these rooms, which are already poorly insulated, even more inefficient to heat. Costs and savings are calculated for installing a fire-resistant, fully insulated false ceiling in 3 buildings which are infrequently used, resulting in a 30% thermal	Medium	£1500	N/A	N/A	£69	TBC

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			efficiency improvement.						
MPF7	Separation of electricity supply Thornbury Town FC/TTC	Pavilion	While the separation of the electricity supply between TTC and Thornbury Town FC would not automatically result in lower energy consumption, it has two main advantages: - It allows TTC to accurately measure their own energy consumption on the site, thereby more accurately informing energy efficiency conversations. - It incentivises the Football Club to put energy saving measures in place (see MPF5) This is a best practice measure that will not result in any direct carbon savings for TTC. It will, however, reduce TTC's financial commitments by an estimated 50% for the MPF.	Medium	N/A	N/A		£2308 – this is the estimated annual cost to TTC of the FC's electricity consumption	Yes

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			Lighting in all buildings is currently operated by manual switches. While many buildings are not used frequently (for example changing rooms), some, such as the public toilets, are in daily use. Installation of lighting sensors would reduce the amount of time lighting is needed and would prevent lights being left on unnecessarily or accidentally. Savings are based on a 5% reduction in overall electricity costs.						
MPF8	Installation of lighting sensors in all buildings	Pavilion		Medium	£1,200.00	412	£0.28	£115.36	Yes
MPF9	Additional electric car charging points enabling conversion of petrol/diesel vehicles to electric	Machine Store	Additional electric vehicles will require new charging points at the MPF machine store.	Medium	£2000	-3000	£0.28	-£840.00 This should be offset against the cost of diesel and petrol, which for 2025-26 totalled £2733.54	No
MPF10	Extended solar array	Machine Store Public Toilets Officials/Away change	Based on the extension of the solar array to 4x that used at the Town Hall, with a 50% reduction applied for power returned to the grid.	Long	£15,000	4180	£0.28	£1170.40	No

Thornbury Town Council Decarbonisation Road Map & Communications Plan

			While TTC uses a renewable energy supplier, scope 3 T&D emissions are still generated by electricity consumption. Generating and being able to store energy on-site via solar and battery capture, reduces both cost and emissions. This is because the fugitive emissions involved in centralised electricity generation are avoided and the cost of energy used is greater than the tariff gained from selling excess energy back to the grid. With additional solar/battery storage a 4- year carbon payback period is needed to account for the carbon generated by its manufacture.						
MPF11	Installation of battery storage for solar	Plant room/Boiler Room		Long	£8,000.00	4180	£0.28	£1170.40	No
MPF12	Replacement of gas boiler with heat pump/solar	Pavilion	Replacement of all current gas heating elements (flat heating, water heating) with heat pump and solar array	Long	£50,000	9429	£0.08	-£2800.00	No

Figure 9.2.4: Mundy Playing Fields Summary by Scope (with 'big ticket' items)

Mundy Playing Fields with 'big ticket' items				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Mundy Playing Fields	1	2.6	2.47	0.13
Mundy Playing Fields	2	0	0	0
Mundy Playing Fields	3	0.3	-0.08	0.38
Total		2.9	2.39	0.51

Figure 9.2.5: Mundy Playing Fields Summary by Scope (without 'big ticket' items)

Mundy Playing Fields without 'big ticket' items				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Mundy Playing Fields	1	2.6	0.75	1.85
Mundy Playing Fields	2	0	0	0
Mundy Playing Fields	3	0.3	0.11	0.19
Total		2.9	0.86	2.04

Figure 8.2.6: Mundy Playing Fields Summary Timescales (with 'big ticket' items)

Mundy Playing Fields with 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	MPF	2.9	0.31	2.59
Medium (2027-28)	MPF	0	0.39	2.2
Long (2028 - 2030+)	MPF	0.3	1.69	0.51

Figure 8.2.7: Mundy Playing Fields Summary Timescales (without 'big ticket' items)

Mundy Playing Fields without 'big ticket' items				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	MPF	2.9	0.31	2.59
Medium (2027-28)	MPF	2.59	0.39	2.2
Long (2028 - 2030+)	MPF	2.2	0.16	2.04

Figure 8.2.8: Return on investment summary (financial) of Mundy Playing Fields Measures

Measure Ref.	Cost*	Return on Investment – Financial (Years)
MPF1	£1200	11
MPF2	Using old stock	N/A
MPF3	£1000	
MPF4	£0	Included in Pavilion redevelopment plan
MPF5	£0	Included in Pavilion redevelopment plan
MPF6	£0	Included in Pavilion redevelopment plan
MPF7	£0	Included in Pavilion redevelopment plan
MPF8	£1200	10

MPF9	£1000	See ancillary operations
MPF10	£15,000	13
MPF11	£8000	7
MPF12	£50,000	66

* Where works are already planned as part of the Pavilion redevelopment, costs have not been included here.

Mundy Playing Field Recommendations and Comments

The pavilion redevelopment plan will go a long way to making operations more energy and carbon efficient. Officially separating metering for TTC and the Football Club will, furthermore, allow a much more accurate view of actual TTC operational carbon emissions at the site.

Added to short-term wins, the redevelopment works will reduce emissions by 0.75 tCo2e (Scope 1). To drastically reduce the emissions from the pavilion, longer-term, more expensive works should be considered. In particular, the extension of the solar array and accompanying battery storage should be considered, particularly as and when vehicles are converted to run on electricity. Being able to self-generate and store electricity, particularly during the summer months when grounds maintenance is at its peak, has the potential to make significant financial and carbon savings.

Alternative renewable energy sources should also be considered, in particular the installation of a wind turbine. This would further reduce our reliance on outside sources of energy.

The heating and hot water systems could, in time, be converted to a heat pump or similar, electrically powered system. The redevelopment should bear this possibility in mind and ensure that the building is as prepared as possible for this eventuality. The redevelopment works should aim to improve the overall thermal efficiency of the building, thereby making it as ready as possible for a heat pump retro fit. Also, it is recommended that the generation and storage of site-based renewable energy is made a pre-requisite for conversion to an electrical heating or hot water system.

9.3: Cemetery and Chapel

Thornbury Cemetery and the associated mortuary chapel (Figure 8.3.1) were founded in the late 19th century. Management and ownership of the cemetery was passed to the then Parish Council in 1897. Since then, it has been managed and maintained by the Council on behalf of the people of Thornbury.

The chapel has not actively been used for its original purpose some years, resulting in it falling into a state of some disrepair. A recent project has, however, restored parts of the chapel, replacing the floor, installing updated electrics and decorating (see Figure 8.3.2).

Figure 9.3.1: Thornbury Cemetery Chapel

Source: Thornbury Roots



In addition to the cemetery grounds and chapel, there are facilities for the use of the cemetery supervisor and other TTC staff. These comprise a small storage/sitting area, kitchenette and toilet. There are plans to close this facility and replace it with toilets and other conveniences that can be used by members of the public and staff. This will increase the useability of the chapel, making it viable for memorial services, community events, and classes.

The restoration of the chapel and the introduction of public facilities at the site will inevitably increase the consumption of energy on the site, which is currently low. Therefore, it is important that works to increase

the energy efficiency of the chapel building are prioritised to minimise the impact of additional use. The figures quoted below assume a 50% uplift in energy consumption at the cemetery compared to the 2025-26 baseline.

Figure 9.3.2: Thornbury Cemetery Chapel Interior

Source: Alan Stealey



Figure 9.3.3: Cemetery and Chapel Decarbonisation Measures

Ref.	Proposed Measure	Location	Timescales	Rationale/Notes	Estimated Cost	Estimated Energy Saving (Kwh per year)	Energy cost (per Kwh) Gas or Electricity as relevant	Potential Cost Saving per year	Carbon Saving (tCO ₂ e)
C1	Secondary glazing	Chapel	Medium	The windows in the chapel are leaded and single glazed. They add considerably to the character of the building and as such cannot be replaced. Specialist contractors can provide options for secondary glazing in ecclesiastical buildings. You could expect to reduce heat loss by around 75%.	£2,000.00	1118	£0.28	£313.04	0.02
C2	Improved door insulation	Chapel	Short	The current doors have reasonably large gaps at the middle and bottom. Installation of brushes or other suitable insulation would be low cost and would reduce heat loss.	£100.00	78	£0.28	£21.84	Cost saving only
C3	Switch off screens for CCTV when not in use	Chapel Staff Area	Short	This is an easy fix that costs nothing but immediately saves energy. While savings are not large, this is a best practice procedure that should be adopted on all sites.	£0.00	600	£0.28	£168.00	0.01

Thornbury Town Council Decarbonisation Road Map & Communications Plan

C4	Install light sensors	Chapel Staff Area	Medium	The Chapel and any new facilities, as infrequently used buildings, would benefit from installation of lighting sensors, saving an average of 5% on overall electricity costs.	£500.00	59	£0.28	£16.52	Cost saving only
C5	Install infra-red heating system	Chapel	Medium	Infra-red heating heats objects and people rather than the air. It is immediately effective, removing the need to preheat an area before use. For infrequently used rooms with high ceilings, such as the chapel, this is an ideal heating solution. There is no baseline to compare to, as the chapel isn't currently heated. However, in a building of this type, infra-red heating would reduce energy use 30% over other electric heating solutions.	£7,000.00	338	£0.28	£94.64	0.01
C6	Replace doors with lobby (see St Mary's Church)	Chapel	Long	As per C2, the current chapel doors are leaky and open directly on to the outdoors. Every time the doors are opened, cold air is admitted, increasing the need for heating when the building is in use. Secondary doors and a porch could reduce heat loss by 10%.	£10,000.00	78	£0.28	£21.84	Cost saving only

Figure 9.3.4: Cemetery and Chapel Summary by Scope

Cemetery and Chapel				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Cemetery	3	0.07	0.04	0.03
Total		0.07	0.04	0.03

Figure 9.3.5: Cemetery and Chapel Summary by Timescales

Cemetery and Chapel				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	Cemetery	0.07	0.01	0.06
Medium (2027-28)	Cemetery	0.06	0.03	0.03
Long (2028 - 2030+)	Cemetery	0.03	0	0.03

Figure 9.3.6: Return on investment summary (financial) of Mundy Playing Fields Measures

Measure Ref.	Cost	Return on Investment – Financial (Years)
C1	£2000	6
C2	£100	5
C3	£0	Immediate
C4	£500	30

C5	£7000	74
C6	£10,000	458!

Cemetery and Chapel Recommendations and Comments

Estimating the energy use of the chapel and Cemetery at present is speculative as the future use of the chapel and the reconfiguration of the staff area and installation of public toilets is not yet known.

It is recommended that low-cost options, such as C2 and C3 are progressed as a priority. C1 and C5 should be considered as and when use of the building is extended, perhaps as part of the staff area redevelopment/installation of public toilets.

As and when the staff area is changed and/or public toilets are redeveloped, energy efficient and emissions reducing design and build principles should be adopted as a matter of course.

9.4: Ancillary Operations

9.4.1: Vehicles and Equipment

In addition to TTC's buildings, there are vehicles and equipment that are used by TTC staff, primarily for the maintenance of the grounds managed by TTC. Some of these vehicles and equipment currently run on and otherwise consume fossil fuels, adding to Scope 1 emissions. There are already plans in place to phase out the use of fossil fuels in TTC equipment and replace fossil fuel-powered machines with electric equipment. Where a replacement is already planned, I have recorded the cost as zero in the Road Map. At present, there are some pieces of equipment for which no viable alternative exists. Where this is the case, this is noted below and the emissions allocated to these pieces of equipment account for the remaining Scope 3 emissions generated by TTC machinery. The additional electricity that electrically powered equipment will require has already been accounted for in Section 8.2, so is not recounted here.

To balance the environmental impact of replacing the vehicles with the positive environmental impact of their replacement, vehicles should be used for the maximum viable period before replacement. Their emissions should therefore continue to be counted until they are replaced. As the recommendation is that current vehicles are run to the end of their current lifespan, there are no additional capital costs involved in the replacement of vehicles for decarbonisation purposes.

Figure 9.4.1.1: Current Grounds Maintenance Equipment Running on Fossil Fuels

Equipment Description	Location	Fuel Type	Year of Purchase	Expected lifespan	Replacement Options	Replacement Due	Replacement Planned?	Estimated Net Cost of Replacement	Total Emissions Share	Reduction on replacement (tCo2e)
										5.1
New Holland Tractor - WX58 0MH	MPF	Diesel	Not known - registered in 2008	15 - 20 years	Electric	2023-2028	No	£45,000.00	10%	0.51
Ransome Ride on Mower - WX19 EJJ	MPF	Petrol	2019	10-15 years	Electric	2029-2034	No	£30,000.00	10%	0.51
Toro Brush Cutter (Mower) BRC-28	MPF	Petrol	2024	5-10 years	Electric	2029-2034	No	£350.00	2%	0.1
Honda HP500B Power Carrier 163cc 4-Stroke Engine	CEM	Petrol	2021	10-20 years	Electric (not yet available in UK?)	2031 - 2041	No	N/A	1%	0
Generator	MPF	Diesel	2018	15-30 years	Hydrogen (technology evolving)	2033-2048	No	N/A	1%	0

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Amazon Profihopper - WX25 EHE	MPF	Diesel	2025	10-15 years	No current realistic alternative	2035-2040	No	N/A	10%	0
Ford Transit Van - CV11 KFC	MPF	Diesel	Not known - registered in 2011	250k miles Currently 65k on clock (approx.)	Electric		No	£60,000.00	38%	1.9
ATCO Quatro 16S Mower (Holy Mowers)	CY	Petrol	2021	5-10 years	Electric	2026-2031	Yes	£0.00	2%	0.1
Stihl Path Blower	CEM	Not known	2022	5-10 years	Electric	2027-2032	Yes	£0.00	1%	0.05
Stihl Path Blower	MPF	Not known	2022	5-10 years	Electric	2027-2032	Yes	£0.00	1%	0.05
Chain Saws x2	MPF	FF			Electric	2026	Yes	£0.00	2%	0.1
Husqvarna Mower	MPF	FF			Electric	2026	Yes	£0.00	2%	0.1
John Deer Mower	CEM	FF	2018		Electric	2026	Yes	£0.00	2%	0.1
John Deer Mower	MPF	FF			Electric	2026	Yes	£0.00	2%	0.1
Stihl Strimmers x3	CEM/MPF	FF	2019		Electric	2026	Yes	£0.00	3%	0.15
Echo Brush Cutter SRM520ES (Strimmer)	MPF	FF	2022		Electric	2026	Yes	£0.00	1%	0.05
Echo PB - 770 BackPac Blower	CEM	FF	2021		Electric	2026	Yes	£0.00	1%	0.05
Eco PB770 BackPac Blower	MPF	FF	2021		Electric	2026	Yes	£0.00	1%	0.05
Masport 18" Mowers x2	CEM	FF	2023		Electric	2026	Yes	£0.00	4%	0.2
Masport 800st Mower	CEM	FF	2023		Electric	2026	Yes	£0.00	2%	0.1
Masport Rotarola 18" SP Roller Mowers x2	CEM	FF	2021		Electric	2026	Yes	£0.00	4%	0.2
								£135,350.00	100%	4.42

Figure 9.4.1.2: Ancillary Operations Summary by Scope

Ancillary Operations				
Operation	Scope	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Total Residual Emissions (tCO2e)
Ancillary Operations	1	5.1	4.42	0.68
Total		5.1	4.42	0.68

Figure 9.4.1.3: Ancillary Operations Summary by Timescale

Ancillary Operations				
Timescale/Year	Operation	Starting Emissions (tCO2e)	Emissions Reduction (tCO2e)	Residual Emissions (tCO2e)
Short (2026-27)	AO	5.1	1.91	3.19
Medium (2027-28)	AO	3.19	1.9	1.29
Long (2028 - 2030+)	AO	1.29	0.61	0.68

9.4.2: Water Supply, Treatment, Waste Generated from Own Operations

Currently, water supply and treatment accounts for 0.72% of total overall emissions. As such, I have not generated specific targets for water and water treatment reductions.

However, the Climate and Nature Action Plan has an ambition to reduce our reliance on potable water. This will become increasingly important as dryer, hotter summers make drought more frequent. Assuming that we can improve our rainwater harvesting and perhaps incorporate grey water collection and reuse at the Mundy Playing Fields and Cemetery, we may see a moderate reduction in water consumption. For the purposes of this road map, I have estimated a 10% cumulative reduction in water consumption over the reporting period.

Waste generated from our own operations is the largest contributor to scope 3 emissions, and accounts for 3.63% of total overall emissions. Ongoing initiatives are in place to reduce waste. For the purposes of this report, I have assumed a cumulative 20% reduction in waste generated over the reporting period.

Figure 9.4.2.1: Water Supply, Treatment, Waste Emission Reduction and Remaining Emissions

Emission Type	Starting Emissions	Reduction Over Plan Period	Net Remaining Emissions
Water Consumption	0.13	0.01	0.12
Water Treatment	0.02	0.00	0.02
Waste Generated	0.76	0.15	0.61
Total	0.91	0.16	0.75

9.5.3: Active Travel and Decarbonisation Leadership

Although Scope 3 emissions from staff travel are not included directly in this report, TTC's Climate and Nature Committee are committed to taking a holistic view of the impact of TTC operations, as well as providing clear leadership on decarbonisation to the wider population. As such, there are several initiatives that the Council may wish to consider adopting to reduce staff travel emissions and provide good practice decarbonisation leadership. These are detailed below.

Figure 9.5.3.1: Active Travel and Decarbonisation Leadership Initiatives

Source: TTC

Measure	Category	Scope Emissions	In scope?	Reason for recommendation	Notes/Links
Cycle to Work Scheme	Active Travel	Scope 3	No	Encourage active travel among staff	https://www.cyclinguk.org/article/guide-cycle-work-scheme
Provision of bicycle(s) to navigate between TTC sites	Active Travel	Scope 1	Yes	Reduce emissions	
Electric car salary sacrifice scheme	Decarbonisation Leadership	Scope 3	No	Employee benefit Best practice Zero cost to employer	https://discover.octopusev.com/salary-sacrifice-for-employers/
Carbon literacy training - staff and councillors	Decarbonisation Leadership	Scope 1, 2 & 3	Yes	Support staff and councillors with TTC and personal decarbonisation	TTC can work towards becoming a certified carbon literate organisation https://carbonliteracy.com/carbon-literate-organisation/
Electric car charging points for staff in staff car parking areas	Decarbonisation Leadership	Scope 1 & 3	Partially	Direct support for staff to charge vehicles Fleet vehicles can be charged	Government subsidies (up to £500 per socket) available to support installation of electric charging points at workplaces https://www.find-government-grants.service.gov.uk/grants/workplace-charging-scheme-2#summary
Offer sustainable travel leave	Decarbonisation Leadership	N/A	No	Provide best practice leadership	https://www.sustainabletravelleave.org/

Thornbury Town Council Decarbonisation Road Map & Communications Plan

				Adds to employee benefits package	
Explore local options for carbon offsetting schemes	Decarbonisation	Scope 1,2 & 3	Yes	Offers local charities and organisations an opportunity to benefit from offsetting expenditure. Better offsetting traceability. Multiple benefits for the community and environment.	

10. Funding Options and Payback Periods

There are currently no direct funds to support Town and Parish Councils with decarbonisation. There are some regional funds, but these would need to be accessed via South Gloucestershire Council. Other funding requires the generation of community energy (i.e., energy that would be accessible for us and for the wider community to use). Figure 10.1 shows options for TTC. If required, these could be investigated further. However, in the first instance, TTC should seek to self-fund initiatives based on reinvesting energy cost savings gained from decarbonisation activities into further decarbonisation measures.

Funding Scheme	What it Funds	Direct Access for Town Councils?	Notes
Local Net Zero Hubs	Project development, feasibility	✓ Yes	Best route for early-stage support
Community Energy Fund	Community renewables, heat, retrofit	✓ Yes	Grants ~£30–40k typical
Local Net Zero Accelerator	Large-scale project bundling	✗ Not directly	Work via principal authority
Mayoral Renewables Scheme	Regional renewable rollout	✗ Not directly	Delivered via combined authorities
LGA SIP Programme	Training, tools, carbon literacy	✓ Yes	Capacity-building, not capital

Figure 10.1: Decarbonisation Funding Options for Town and Parish Councils

Source: Copilot

Figure 10.2 outlines the total monetary costs of all suggested decarbonisation measures, broken down by operation and by short-, medium- and long-term delivery. The table also shows the total cost of the measures and the monetary savings made as a result over 1 year and over the plan period, providing a net overall cost/saving. It also provides an estimate of carbon savings the measures would enable. It separates out the ‘big ticket’ items, such as heat pumps and the chapel lobby to give a range of costs/savings commensurate with the recommendations made above.

Figure 10.2: Decarbonisation Measure Costs and Savings – All Measures

Source: TTC

Operation	Time Scale	Cost	Saving Over 1 year	Cumulative Saving by End of Plan Period	Net Cost/Saving
Town Hall	Short	£1,000.00	£94.00	£376.00	-£624.00
	Medium	£17,500.00	£3,805.00	£11,415.00	-£6,085.00
	Long	£70,000.00	-£4,082.00	-£4,082.00	-£74,082.00
	Total	£88,500.00	-£183.00	£7,709.00	-£80,791.00
	Less Heat Pump	-£70,000.00	£4,082.00	£4,082.00	
		£18,500.00	£3,899.00	£11,791.00	-£6,709.00
Mundy Playing Field	Short	£1,200.00	£108.00	£432.00	-£768.00
	Medium	£5,200.00	£2,711.00	£8,133.00	£2,933.00
	Long	£73,000.00	£294.00	£294.00	-£72,706.00
	Total	£79,400.00	£3,113.00	£8,859.00	-£70,541.00
	Less Heat Pump	-£50,000.00	£2,800.00	£2,800.00	
		£29,400.00	£5,913.00	£11,659.00	-£17,741.00
Chapel/Cemetery	Short	£100.00	£22.00	£88.00	-£12.00
	Medium	£9,500.00	£425.00	£1,275.00	-£8,225.00
	Long	£10,000.00	£22.00	£22.00	-£9,978.00
	Total	£19,600.00	£469.00	£1,385.00	-£18,215.00
	Less lobby	-£10,000.00	-£22.00	-£22.00	
		£9,600.00	£447.00	£1,363.00	-£8,237.00

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Ancillary Operations	Total	£135,350.00	£1,893.00	£7,572.00	
	Less additional cost of replacement (fossil fuel alternative)	£25,000.00			
	Total cost of non-electric replacement equipment	£160,350.00			
	Net Saving	£25,000.00	£1,893.00	£7,572.00	£34,465.00
Misc. Scope 3	Long	£0.00	£0.00	£0.00	£0.00
Offsetting Costs		£600.00	-£600.00	-£2,400.00	-£2,400.00
Total Cost/Saving (with big ticket items)		£162,500.00	£4,692.00	£23,125.00	-£139,375.00
Total Cost/Saving (without big ticket items)		£42,500.00	£11,705.00	£32,385.00	-£10,115.00

*As all equipment would need replacing at the end of its useful life anyway, this figure shows the cost saving experienced by replacing with electric rather than fossil fuelled alternatives.

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Figure 10.3: Decarbonisation Measure Costs and Savings – Recommended Measures Only

Source: TTC

Operation	Time Scale	Cost	Saving Over 1 year	Cumulative Saving by End of Plan Period	Net Cost/Saving
Town Hall	Short	£1,000.00	£94.00	£376.00	-£624.00
	Medium	£8,000.00	£3,293.00	£9,879.00	£1,879.00
	Long	£0.00	£0.00	£0.00	£0.00
	Total	£9,000.00	£3,387.00	£10,255.00	£1,255.00
Mundy Playing Field	Short	£1,200.00	£132.00	£528.00	-£672.00
	Medium	£5,200.00	£2,711.00	£8,133.00	£2,933.00
	Long	£23,000.00	£294.00	£294.00	-£22,706.00
	Total	£29,400.00	£3,137.00	£8,955.00	-£20,445.00
		£29,400.00	£3,137.00	£8,955.00	-£20,445.00
Chapel/Cemetery	Short	£100.00	£22.00	£88.00	-£12.00
	Medium	£2,500.00	£425.00	£1,275.00	-£1,225.00
	Long	£0.00	£0.00	£0.00	£0.00
	Total	£2,600.00	£447.00	£1,363.00	-£1,237.00
		£2,600.00	£447.00	£1,363.00	-£1,237.00

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Total Cost/Savings		£41,000.00	£6,971.00	£20,573.00	-£20,427.00
Ancillary Operations	Total cost of electrically powered replacement equipment	£135,350.00			
	Total cost of fossil-fuelled replacement equipment	£160,350.00			
	Net saving from replacing with electrically powered equipment	£25,000.00		£25,000.00	£25,000.00
	Additional cost of electricity for charging*	£840.00			
	Saving on fossil fuels	£2,734.00			
	Net saving on fuel	£1,894.00	£1,894.00	£1,894.00	£1,894.00
	Net Savings	£25,000.00	£1,893.00	£7,572.00	£34,465.00
Offsetting Costs		£600.00	-£600.00	-£2,400.00	-£2,400.00
Total overall cost/saving					£11,638.00
	* if electricity supplied by the grid. If renewables installed at MPF this cost will reduce.				

11. Communications Approach and Plan

As well as undertaking its own decarbonisation journey, TTC is committed to supporting Thornbury residents and businesses to undertake their own decarbonisation journey. This may take the form of telling the story of our journey, sharing best practice, discussing the challenges and opportunities created by decarbonisation, or signposting to further help and resources.

The plan below gives a broad outline of the topics and formats that engagements might take. However, full details will be available via the annual Climate and Nature Communications and Events plan, which will be discussed at the Thriving Nature working group and noted at the Climate and Nature Committee. The Climate and Nature Communications and Events plan will be aligned with the wider TTC Communications Strategy.

Detail	Communication Type	Delivered via	Frequency	Audience
Carbon Report detailing in scope TTC carbon emissions	Report	Email	Annual	Officers and Councillors
TTC Decarbonisation Roadmap	Report	Email	Once	Officers and Councillors
TTC Decarbonisation Roadmap - Shareable	Report/Graphics	Website social media Press	Once	Public
Decarbonisation Jargon Buster	Report/Graphics	Email Website social media	Once	Officers and Councillors Public
Decarbonisation Online Training	Training	Online	Once	Officers and Councillors
Decarbonisation Roadshow - Businesses/Commercial Buildings	Stand/Talks	In Person	Annual	Local businesses and organisations
Decarbonisation Roadshow - Public/Residential Buildings	Stand/Talks	In Person	Annual	Residents In collaboration with CATSA/ST?
Updates on progress against plan	Report	Email Committee	Bi-monthly	Climate and Nature Committee
Reports and recommendations for decarbonisation measures	Officer Report	Email Committee	As needed	Climate and Nature Committee F&GP Committee Full Council
Updates on progress against plan	Report/Graphics	Website/social media	Quarterly	Public
Climate resilience workshops	Stand/Talks	In Person	Annual	Officers and Councillors Public

Thornbury Town Council Decarbonisation Road Map & Communications Plan

Annual progress report	Report/Graphics	Website social media Press	Annual	Officers and Councillors Public
------------------------	-----------------	----------------------------------	--------	------------------------------------

Figure 11.1: TTC Decarbonisation Roadmap Communications Plan

Source: TTC

12. Climate Mitigation and Resilience

Climate change mitigation is largely concerned with reducing the severity of climate change by limiting the release of GHGs and extracting those that remain from the atmosphere.³ This report is primarily concerned with introducing measures to reduce TTC's carbon footprint, thereby mitigating against climate change.

However, given the accelerating rate of climate change and the impacts that are already being felt, it is also necessary to consider measures to improve climate change resilience, defined as adaptations that can help 'to prepare for, respond to, and recover from the impacts of hazardous climate events' (see Figure 12.1).⁴

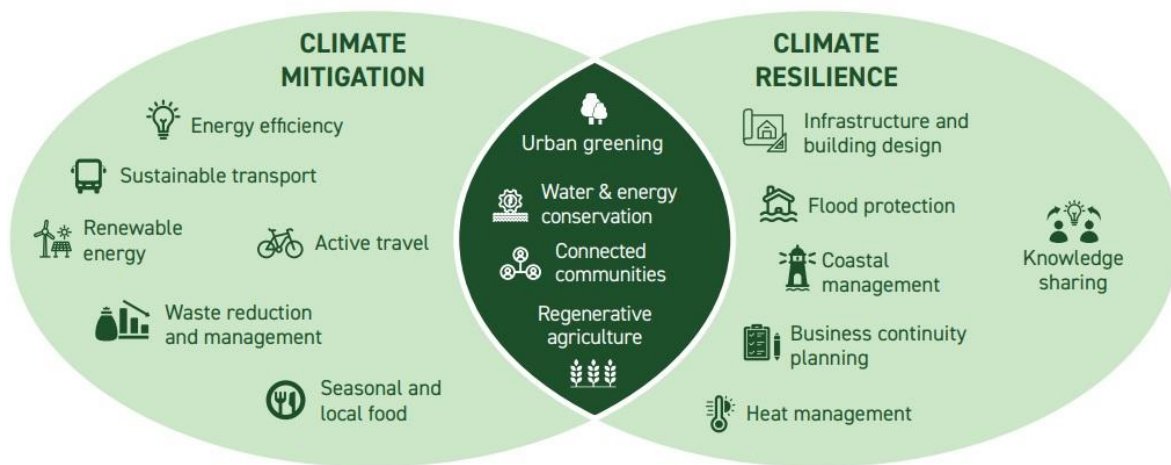


Figure 12.1: Climate Mitigation and Climate Resilience

Source: West of England Combined Authority.

As global heating accelerates, it is likely that springs and summers in the UK will continue to get dryer and hotter and autumns and winters will be milder and wetter.⁵ Such seasonal alterations have the potential to create weather-related issues year-round, where hazardous weather events and conditions cause threats to life and livelihood for all species. Climate change will, therefore, create economic, social, political, environmental and practical challenges that will have broad ranging impacts, as outlined in [Figure 2.1](#).

Extreme weather events and environmental conditions could include, but are not limited to:

- Drought
- Increasing incidences of extreme heat/heat waves
- Flooding
- Increasingly severe and more frequent storms

³ The Highland Council, Net Zero Strategy, p. 77.

⁴ The Highland Council, Net Zero Strategy, p. 77

⁵ Gov.UK, Climate Change Explained, <https://www.gov.uk/guidance/climate-change-explained#impacts-of-climate-change>

- Sea level rises
- Threats to food security
- Changing seasonality of extreme weather
- Increasing biodiversity loss and mass species extinction

The impacts of climate change will be experienced and felt internationally, nationally, regionally and locally, to varying degrees, depending on local environmental, economic and social conditions. For Thornbury, there are several areas that should be highlighted as being of particular importance.

- While Thornbury is not considered at particular risk of flooding, flooding events have occurred here in the past and repeats could become more severe or more frequent. The town's proximity to the flood plains of the Severn Estuary, which has the second highest tidal range in the world, highlights the potential for hazardous-to-life levels of flooding in future.
- Along with many other areas of Southern England, the Southwest has experienced decreasing levels of summer rainfall and increasing incidences of drought in recent years. Unusually for an historical town, Thornbury does not directly intersect with a main watercourse or river. Additionally, our proximity to large urban conurbations that have high water demand makes us vulnerable to issues caused by water shortages.
- As of the 2021 census, almost a quarter of Thornbury residents were over the age of 65.⁶ Compared to county and national averages, we have a greater percentage of people aged between 75 and 84 and over the age of 85 living in our area.⁷ Older people are at a greater risk of illness, hospitalisation and death during heatwaves, meaning that increasing incidences of days that are categorised as very hot (i.e., over 30° c) are of particular concern for this section of the town's residents.
- While Thornbury has a slightly above-county average of people living without any deprivation markers (relating to education, employment, health, or housing), there are still over 45% of residents with one or more deprivation markers.⁸ Those who are already vulnerable due to economic or social deprivation are expected to be further disadvantaged by climate change, in particular where it threatens services and infrastructure.
- In the past 30 years, species abundance and health have declined by between 30% and 40% in the UK. Ecosystems that are already under pressure face a greater threat of collapse as non-native species increase, storms become more frequent and severe, sea levels rise, the seasons shift, and drought becomes more prevalent due to climate change. A decline in soil health, biodiversity and wildlife has a direct and deleterious impact on air quality, food production, and human health and wellbeing.

TTC's ability to directly influence these factors is limited and initiatives are being progressed at national and regional levels to address the need for greater climate resilience in the UK.

Awareness of the challenges that the town is likely to face, and initiatives to key Thornbury into regional, national, and international programmes of resilience are, however, needed. There are

⁶ South Gloucestershire Council, Thornbury: Ward Profile, <https://beta.southglos.gov.uk/static/fbf1149d9f5e7198889cc26382e7314d/Thornbury-ward-1.pdf>, p. 1.

⁷ Thornbury Ward Profile, p. 2.

⁸ Thornbury Ward Profile, p. 3.

also areas where the Town Council can use its influence and decision-making processes to support greater climate resilience.

These areas include:

- Planning Policy and Consultation
- Grounds Management
- Landscape design and land use
- Building design, retrofit and use
- Collaborations with organisations locally and nationally to enhance Thornbury's climate resilience.

12.1 Planning Policy and Consultation

TTC is not a planning authority at present. It is, however, consulted on new planning applications and has a neighbourhood plan. The current iteration of the neighbourhood plan is valid until 2036, taking it beyond the life of this Decarbonisation Road Map and TTC's net zero ambitions.⁹

The neighbourhood plan provides a framework for planning and development in the area, influencing subjects such as housing, service provision, employment, education, and protection of the natural environment. The plan includes a section on sustainable design and construction, pointing out that development should seek to minimise its environmental impacts before, during and after building takes place.

Given the issues outlined above, new and redeveloped housing and commercial building in the area should give priority to:

- Embedding renewable energy generation and storage
- Providing a means to renewably heat and cool air
- Designing to minimise heat loss in winter and heat retention in summer
- Treating water as a valuable commodity by capturing rain and grey water
- Not developing on areas prone to flooding
- Including nature-based solutions to potential flooding in design and build
- Achieving biodiversity net gain to mitigate any negative impacts on local biodiversity
- Providing active travel and public transport solutions
- Providing local opportunities for good, well-paid employment

12.2 Grounds Management

TTC manages playing fields, a cemetery, play areas and other green spaces on behalf of the people of Thornbury. In recent years, the grounds maintenance regime has been adapted to balance the needs of people and wildlife. Some areas have been actively enhanced for wildlife via planting, whilst others are now managed more sympathetically via reduced mowing or adapted management.

In addition to the direct decarbonisation measures already detailed in this report, grounds maintenance protocols should seek opportunities to capture and reuse water where possible and develop planting plans that minimise water use.

⁹ Thornbury Town Council, Thornbury Neighbourhood Plan, 2019-2036, <https://localcouncilwebsites.blob.core.windows.net/thornbury-town-council/page/policies-procedures/submissionversionthornburyneighbourhoodplan.pdf>

The adoption of ‘no dig’ and organic principles should be considered in areas where this is practical and possible. These principles minimise the emission of carbon into the atmosphere and improve soil sustainability.

12.3 Landscape Design and Land Use

Developments in our managed green spaces, should, wherever practicable, seek to work with the topography, hydrology and geology of the site in question. For example, the project to replace the splashpad at the Mundy Playing Fields will seek to provide a sustainable, long-term play solution that provides enhancements for biodiversity alongside entertainment for families and other playing field users. The project to replace the splashpad aims to minimise the risk of localised flooding in the playing fields by working with the natural features of the land. It also takes a responsible approach to the management of water by assessing and mitigating against TTC’s downstream impacts.

Similarly, the development of a memorial woodland and wellbeing garden at the cemetery will seek to work with the natural features of the land to minimise flooding in areas where it is not wanted and develop watery habitats where the land suggests they would be welcome.

Any land use frameworks or strategies should, as in these two examples, prioritise nature-based solutions that are beneficial for people and wildlife, alongside sustainable design and development.

12.4: Building Design, Retrofit and Use

To maintain a workable environment so that the Council can continue to provide its services to the residents of Thornbury, TTC’s own buildings should follow the same design and development principles as outlined above in section 11.1. These include:

- Embedding renewable energy generation and storage
- Providing a means to renewably heat and cool air
- Designing to minimise heat loss in winter and heat retention in summer
- Treating water as a valuable commodity by capturing rain and grey water

Additionally, with regards to the use of buildings and other assets, TTC should consider measures such as:

- Reviewing working patterns to accommodate changing weather conditions
- Enabling hybrid working, including the provision of online council committee meetings (as and when legislation allows)

TTC should also develop and put in place strong business continuity plans and risk assessments and mitigations, so that its operations can be maintained in emergency situations.

12.5: Working with others

As mentioned above, Thornbury is not isolated or alone in facing into and dealing with the climate crisis. To maximise the Town’s climate resilience, all possible resources should be leveraged. Opportunities to work with regional and national authorities to maximise Thornbury’s climate resilience should be sought. TTC should also seek out and collaborate with local business, residents, schools, and voluntary and non-profit organisations to promote, support and encourage climate resilience actions. These may include, but are not limited to:

- Emergency planning
- Flood planning

- Education
- Community energy schemes
- Local food growing
- Nature-based solutions to flooding, drought, etc.
- Sustainable commercial and domestic practices
- Biodiversity enhancement

A/c Code	4540 Climate and Nature				Annual Budget	10,250
Centre	190 Projects				Committed	0
<u>Month</u>	<u>Date</u>	<u>Reference</u>	<u>Source</u>	<u>Transaction Detail</u>	<u>Debit</u>	<u>Credit</u>
Opening Balance					0.00	
1	16/04/2026	CAK001	Purchase Ledger	CAKE ORDER FOR EARTH EVENT C/N	84.35	
1	16/04/2026	983	Cashbook	Stationery	2.17	
1	16/04/2026	984	Cashbook	Refreshments and Biscuits	16.54	
1	22/04/2026	993	Cashbook	Climate & Nature Event stock	9.25	
2	08/05/2026	ARK001	Purchase Ledger	SWIFT NEST	71.57	
4	09/07/2026	FIE001	Purchase Ledger	FIELD STUDIES COUNCIL GUIDES	45.00	
4	12/07/2026	BS3001	Purchase Ledger	LOVE PARKS WEEK MOTH MORNING	120.40	
4	21/07/2026	1042	Cashbook	Craft Supplies	2.50	
4	21/07/2026	THE004	Purchase Ledger	C&N EVENT STATIONERY SUPPLIES	53.36	
4	31/07/2026	1061	Cashbook	C&N EVENT (MOTHS) - SUPPLIES	17.28	
5	28/07/2026	AMA001	Purchase Ledger	C&N EVENTS SUPPLIES	46.63	
Account Climate and Nature					Account Totals	
					469.05	0.00
Centre Projects					Net Balance Month 6	469.05

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Climate and Nature Budget Update and Reallocation

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Action



1. Detail

The Climate and Nature Committee budget for 2026-27 was set at £10,250. The budget is currently split amongst various items as follows:

Budget Item	Plan Category	Budget Allocation	Total
Ecological Survey Refresh/Management Plans	Nature	£4,000.00	£4,000.00
Wildflower Reseeding/Patching	Nature	£1,000.00	£5,000.00
Swift Boxes	Nature	£500.00	£5,500.00
Events Expenses	Comms and Engagement	£1,000.00	£6,500.00
Energy Saving Initiatives (Town Wide)	Energy	£1,000.00	£7,500.00
Water Saving Initiatives (Town Wide)	Water	£1,000.00	£8,500.00
Waste Reduction Initiatives (Town Wide)	Waste	£750.00	£9,250.00
Events Expertise	Comms and Engagement	£1,000.00	£10,250.00
	Total	£10,250.00	£10,250.00

The splits detailed above were agreed at the Climate and Nature Committee meeting in October 2025 (CN2526.22). Since the budgets splits were agreed, some plan items have come in below anticipated costs (most notably the ecological surveying) and new events and projects have been agreed. In addition, we have gained £1646 in funding from our participation in the Watermark Town initiative, which will support some of our planned activities, including rainwater harvesting/water saving and outreach.

As such, spending in some budget areas is likely to be less than the splits agreed at the October meeting, whilst in other areas, spending may become restricted in the coming months due to a lack of funds. Furthermore, we did not budget for any biodiversity improvements that might be suggested by the ecological surveys, or for on-site decarbonisation measures.

Details of C&N budget spending to 12 August are shown below:

C&N Spending by Budget Item to 12 August 2026		
Budget Item	Running Spending Total	Remaining Balance
Ecological Survey Refresh/Management Plans*	£1,930.00	£2,070.00
Wildflower Reseeding/Patching	£0.00	£1,000.00
Swift Boxes	£71.57	£428.43
Events Expenses	£412.08	£587.92
Energy Saving Initiatives (Town Wide)	£0.00	£1,000.00
Water Saving Initiatives (Town Wide)	£0.00	£1,000.00
Waste Reduction Initiatives (Town Wide)	£0.00	£750.00
Events Expertise	£120.40	£879.60
Sub Total	£2,534.05	£7,715.95
Wessex Water Watermark Town Grant	£0.00	£1,646.47
Total	£2,534.05	£9,362.42

* Invoice not yet received.

The Committee is asked to consider moving some of the agreed budget between existing items and adding a new budget item to allow for biodiversity improvements, as suggested by the ecological surveying and on-the-ground observations, to be implemented. Additionally, it is proposed that the original budget allocated to Town-wide energy savings initiatives is repurposed to support Town Council decarbonisation measures.

If agreed, the reallocated budget would look as follows. Changed items are highlighted in red (budget reduction), green (budget increase) and blue (new item).

Proposed budget reallocation				
Budget Item	Original Amount	Proposed Amount	Spend to Date	Remaining Balance
Ecological Survey Refresh/Management Plans	£4,000.00	£1,930.00	£1,930.00	£0.00
Wildflower Reseeding/Patching	£1,000.00	£1,000.00	£0.00	£1,000.00
Swift Boxes	£500.00	£750.00	£71.57	£678.43
Events Expenses	£1,000.00	£1,250.00	£412.08	£837.92

Energy Saving Initiatives - (Town Wide)	£1,000.00	£0.00	£0.00	£0.00
Energy Saving Initiatives - Decarbonisation	£0.00	£1,000.00	£0.00	£1,000.00
Water Saving Initiatives (Town Wide)	£1,000.00	£750.00	£0.00	£1,000.00
Waste Reduction Initiatives (Town Wide)	£750.00	£500.00	£0.00	£500.00
Events Expertise	£1,000.00	£1,000.00	£120.40	£879.60
Biodiversity Measures	£0.00	£2,070.00	£0.00	£2,070.00
Sub-Total	£10,250.00	£10,250.00	£2,534.05	£7,965.95
Wessex Water Watermark Town Grant	£0.00	£1,646.47	£0.00	£1,646.47
Gross Total	£10,250.00	£11,896.47		£9,612.42

2. Implications

Environmental

The reallocation of budget spend items will have a positive environmental impact and will allow us to expand our outreach activities. The former will be largely impacted by the reallocation of ecological surveying funds to carry out biodiversity improvements, along with additional funds for swift boxes. The reallocation of budget for swift boxes will allow the 'swifts on the High Street' initiative discussed at the July Thriving Nature Working Group to have greater impact.

Allowing additional funds for events expenses will help to improve our outreach activities, which in turn should support nature and wildlife in the wider town. Improved outreach and activities also benefit the people of Thornbury, by giving more and enhanced opportunities to attend free-of-charge nature connecting events.

Reallocating funds from town-wide energy savings initiatives (which we currently have no active plans to spend) to decarbonisation measures, supports the implementation of the decarbonisation road map (see agenda item 4).

Financial

There are no financial implications for the Council overall. The C&N budget remains the same, but, if accepted, spending will be rejigged to allow it to be directed more appropriately.

3. Recommendations

The Committee is requested to:

- Consider the suggestions for reallocating spending between different items
- Approve the reallocated budget for 2026-27

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Watermark Town Project Update

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Noting



1. Detail

Thornbury Town Council became part of the Watermark Town initiative with a launch event held at St Mary's Church in April. The scheme challenges town and parish councils to lead sustainable water communities to improve life for people, places and the planet.

At the June Climate and Nature Committee, ideas for projects that aligned with the Watermark Town requirements were considered. It was agreed that the following projects should be progressed (CN2627.08):

- Water butts on the High Street.
- Rainwater harvesting at Tesco Petrol Station.
- Pond in the cemetery field.
- Mini pond workshops.
- Eels in Thornbury events.
- Yellow Fish Scheme ('only rain down the drain').

Since these projects were agreed, the following progress has been made:

- All projects have been costed and a funding application to Watermark was successfully made (£1646).
- Funding received has been received.
- Mini ponds workshops have been arranged with the support of the Avon Wildlife Trust. These will take place on 18 October at the Chantry Community and Arts Centre. Up to 20 households will be able to attend and will take home a mini pond kit that they can install in their garden.
- High Street and Tesco visit has been arranged with Thornbury in Bloom for Tuesday 8 September. This visit will extend the scope of the rainwater harvesting project to include business premises on the industrial estate off Midland Way.
- Arrangements have been tentatively made with the Linking the Levels project to run an evening eels talk in October (date TBC) and a Freshwater Lab event at the Mundy Playing Fields during the October half term.
- A drainage map of Thornbury has been received that will allow us to plan and target the Yellow Fish activities most effectively. The activities are planned for delivery next spring.

The pond in the cemetery project may not be delivered within the Watermark Town timescales, due to its dependence on the wider memorial woodland/garden project. However, it is not anticipated that this will have a negative impact on our gaining Watermark Town status, as we will have delivered other projects and enough communications to achieve the award.

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Memorial Woodland/Wellbeing Garden Project
Update & Delegated Spending Powers Request

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Action



1. Detail

At the February meeting of the Climate and Nature Committee, the Committee resolved to accept into C&N deliverables the initial stages of the design and delivery of a memorial woodland/wellbeing garden in a field adjacent to the existing Thornbury cemetery (CN2526.43).

During March, quotes for compiling a concept design and plans were gathered from several landscape designers. At the June meeting of the C&N Committee, it was resolved to recommend the selection of Seed Landscape Design Ltd to the Full Council (CN2627.09). The Full Council subsequently accepted the C&N Committee's recommendation and Seed Landscape Design have been commissioned to produce a concept design and plans for the establishment of a memorial woodland/wellbeing garden. Subsequent to this, Survey Solutions were commissioned to carry out a topographical survey of the site and Seed have carried out an initial site visit. These surveys and site visits will allow Seed to produce a landscape design that works with the natural features already present.

Alongside this, an application has been made to the Forest of Avon/DEFRA Trees for Climate fund to procure funding to purchase and care for between 400 and 600 trees for the site. These trees will be planted by volunteers. As long as the trees can be delivered in time, there will be two weekend volunteering days in late November/early December that will be open to any member of the public who wishes to join. In addition to the two public days, there will be a minimum of two days of volunteer tree planting with rehabilitating prisoners from Leyhill and veterans who work with the Royal British Legion. These volunteering days will be led by a tree planting project officer from Gloucestershire-based charity Stroud Valleys Project.

Due to the time-critical nature of the Forest of Avon funding opportunity, Seed's initial concept design will include a list of tree species and the square meterage of tree planting, allowing trees to be ordered and planted this autumn. To support the Forest of Avon application, it will be necessary to order the trees as soon as we have the species list and square meterage from Seed. Therefore, the initial decision to accept Seed's suggestion for tree species and square meterage will need to be made by Officers. The Forest of Avon funding is likely to save us a significant amount of money on overall project delivery.

There is £25,000 of TTC funding available for this first phase of the memorial woodland project (see appendix for details of proposed project phases). This funding is held in the capital projects budget and as such, the Climate and Nature Committee has no delegated spending power over it. Given the time-critical nature of the project (i.e., that it must be delivered in line with planting seasons and other environmental factors) it is impractical for each operational spending decision to be referred to Full Council. Furthermore, referring all spending decisions to Full Council would not represent the best use of their limited time.

To enable the project to run smoothly and on time, a request should be made to Full Council that delegated spending authority for the remaining memorial woodland budget for this financial year be given to C&N and, in turn, to the C&N Officer. This would allow the C&N Committee to have oversight of spending, while allowing the Officer to make operational decisions regarding project spend (subject to compliance with the Council's Financial Regulations) on a day-to-day basis. Budget reports could be made to Full Council as required.

2. Implications

Environmental

The establishment of a memorial woodland/garden has several key environmental benefits, including habitat creation, air quality improvement, flood mitigation, and carbon reduction. The sooner that the project gets fully underway and plants go into the ground, the sooner these benefits can start to be realised. The public nature of the woodland/garden and the opportunities to work with the community on its establishment support the engagement and nature connection objectives of the Local Climate and Nature Action Plan.

Financial

There are no additional budget implications at present. This proposal simply allows the project to be delivered more effectively and efficiently. Future phases of the project will require additional funding, but this will be dealt with via the usual budget setting process. The overall Seed design will include materials lists, allowing us to fully price the full delivery for future year budget setting purposes.

Allowing the project to be delivered dynamically and at pace enables us to access the funding available from the Forest of Avon, which represents a significant cost saving to the Council. It is worth noting that Forest of Avon funding is paid in arrears. This means that TTC will pay upfront for trees, mulch mats and guards from the Memorial Woodland project budget and will be refunded for these before the end of the financial year.

3. Recommendations

The Climate and Nature Committee is asked to:

- Note the update on progress to date of the memorial woodland project.
- Consider and accept the recommendation that permission be requested from Full Council for delegated spending authority for the memorial woodland project budget for 2026-27 be given to the C&N Committee.
- Delegate day-to-day spending authority for operational deliverables to the C&N Officer (subject to compliance with the Council's Financial Regulations) should delegated spending authority be granted to the C&N Committee.
- Provide authority for the Climate and Nature Officer to order trees from the Forest of Avon without recourse back to the Climate and Nature Committee, based on the initial square meterage and tree species list from Seed. This will enable us to take advantage of the offer from the Forest of Avon and run volunteer planting days this autumn. This will give the trees the best chance to establish before another predicted dry and hot summer in 2027. The full concept design will be brought back to the Climate and Nature Committee in October.

4. Appendix

Memorial Woodland/Garden - Proposed Project Phases

Project Phase	What	When	Design Stage	Opportunities for Engagement	Phase Delivery Owner
1	Concept Design Cost Phase 1 Planting Plan Tree planting (whips and some standards) with support of Forest of Avon Bulb and wildflower planting Path layout and lay base layer (cost dependent) Pond positioning and planting Quantify and Cost Phase 2	Financial Year 2026-27	Concept Surveying Design and Plans	Engagement with public on plans and designs Volunteer planting days Open for visits at end of phase 1 Could offer ashes scattering at end of phase (?) Book of remembrance in chapel (?)	Climate and Nature Committee
2	Further hard landscaping features (e.g., seating, sculptures) Accessible pathways throughout site Link memorial woodland to chapel Further planting - bulbs, trees, wildflowers Further hedge works Quantify and cost stage 3	Financial Year 2026-28	Implement full design	Engagement with public on plans and designs Volunteer planting days Fully accessible visits possible Fully open to the public for reflection and contemplation via hard landscaping features Ashes scattering Informal-style plaques/tree dedications Book of remembrance in chapel Ashes interment	Climate and Nature Committee
3	Buildings (including public facilities) Hard landscaped memorial features (for example, a plaque wall) Opportunities for further ashes interment/more formal memorials	Financial Year 2026-29+ (TBC)	Further detailed design/architecture	Ability to offer services using chapel Ashes scattering and interment More formal memorial options	Open Spaces/Facilities

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Tiny/Edible Forest Options

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Action



1. Detail

The Climate and Nature Committee has a long-term ambition to undertake a Tiny Forest project in Thornbury. The Tiny Forest concept involves densely planting 600 trees in an area the approximate size of a tennis court. Ideally, Tiny Forests are planted in urban locations, where the maximum benefit in terms of air quality, biodiversity and nature connection improvements can take place. Enabling environmental education and study are also key elements of the Tiny Forest concept.

In 2025, a feasibility study of potential sites for a Thornbury Tiny Forest was undertaken. The sites shortlisted were those that were 15-minutes or less walk from at least one school, where value could be added in terms of increasing biodiversity, with access for pedestrians and vehicles, and that were the correct size for a Tiny Forest. The Committee resolved that further investigations should be carried out for sites at Barley Fields and behind the Castle Court car park (CN2526.32). At the June 2026 meeting of the Committee, a new site was added to the mix, which is located behind the Crossways School playing fields (CN2627.13). This land belongs to South Glos Council. I have contacted South Glos Council about this land but have received no response.

There have been two main barriers to progressing the project further. Firstly, TTC does not itself have a site which sufficiently meets the criteria outlined in the feasibility study, meaning that we would need a long-term agreement to host a Tiny Forest from another landowner. Feasible sites have included those currently owned by developers and by South Gloucestershire Council. The former are unlikely to give land up unless planning stipulates that they should do so. The latter are in the process of developing a new local plan which will potentially set out new priorities for their land in Thornbury.

Secondly, there is no current budget for establishing or maintaining a Tiny Forest. The costs for a Tiny Forest are estimated at between £25,000 and £40,000 for its establishment and subsequent maintenance for the first three years. Additionally, TTC officer time to support the project has been limited by other commitments. Maintenance of the Tiny Forest after planting would also be complicated by Grounds Maintenance staff availability, particularly as the site would be new to TTC's estate. Keeping a Tiny Forest on a new site watered and maintained, given the increasing incidences of dry summer weather, may be particularly challenging.

In August, I visited a site in Emerson's Green where a local volunteering group (Friends of Emersons Green Park) have planted an edible tiny forest, after considering the Tiny Forest idea and deciding it was too expensive/not feasible. The edible forest at Emerson's Green is comprised of traditional fruit trees, unusual varieties such as quince, local varieties of plums and damsons, as well as soft fruits such as strawberries and loganberries, rhubarb, figs, and herbs such as rosemary and bay. The group (who meet and work in the park weekly) planted and care for the edible forest and harvest in the autumn for the benefit of the community. Tables

with produce are laid out for local people to collect, which apparently is extremely popular. The Friends of Emersons Green Park group was set up and is supported by enthusiastic members of the community, with arms-length support from the Town Council.

Given the success of the edible forest in Emersons Green, the Committee may wish to consider flexing the Tiny Forest concept to an edible tiny forest. This would give the option to reduce costs, improve local food resilience and benefit a wider population in the town, either directly or in partnership with the Thornbury Foodbank. It may also open further funding/partnership working opportunities. Furthermore, re-consideration could be given to locating the edible forest on TTC-owned and maintained land.

The Committee may also wish to consider options for facilitating a 'Friends of' type group that could help to organise, deliver and maintain the tiny forest. The experience of the Emersons Green group is that this would need to be instigated from within the community, not by the Town Council.

When examining further options for a Tiny Forest in Thornbury, the Committee should consider:

- The intricacies of gaining permission from another landowner for the long-term establishment of a Tiny Forest on their land and the legal work (and cost) this may entail.
- The Officer time involved in managing the project to establish and care for a Tiny Forest and how this should be balanced against other deliverables and priorities. For 2027-28 these include delivery of Phase 2 of the Memorial Woodland project, delivering agreed decarbonisation measures, working with the Grounds Maintenance team on habitat improvements, education and outreach, and devising a new Local Climate and Nature Action Plan (see agenda item 10).
- The feasibility of establishing a 'Friends of' or similar group in Thornbury to assist with establishing and caring for a Tiny Forest or similar and how this could be instigated.
- Whether the Tiny Forest idea should be flexed towards the idea of an edible tiny forest and if so, whether this alters the criteria for selecting its location.
- The overall cost of establishing a Tiny Forest/edible tiny forest in Thornbury, how this might be balanced against other TTC spending priorities, and how financial impacts might be lessened.

The Committee has expressed a desire to include establishment of a Tiny Forest in budgets and work plans for 2027-28 (CN2627.13). Given this, the Committee needs to have a firm plan of what will be delivered, the benefits of doing so, how much funding is needed, and how much officer time is needed to deliver the project and maintain the Tiny Forest afterwards. These areas will need to be addressed at the October meeting of the Climate and Nature Committee if a case is to be made to Full Council for the project to be included in budgets for 2027-28.

2. Implications

Environmental

The establishment of a Tiny or edible tiny forest in Thornbury has clear environmental benefits. These include improved biodiversity, cleaner air, better soil health and enhanced opportunities for nature education and connection. An edible forest has the added benefit of improving local food resilience and directly benefiting the people of Thornbury.

Financial

The financial implications of a Tiny Forest project include the initial, upfront costs to secure a site (which may include legal fees), costs of initial planting and establishment, and costs of ongoing maintenance.

3. Recommendations

The Committee is asked to consider:

- Should the Tiny Forest idea be flexed to an edible tiny forest?
- Should the possibility of locating the project on TTC land be revisited?
- What is the financial and environmental case for the establishment of a Tiny Forest in Thornbury and how should this be presented to Full Council?
- How this project should be prioritised over other Climate and Nature projects the Committee wishes to deliver in 2027-28, particularly given the limited Officer time available (see agenda item 10)?

Officer Report to Thornbury Town Council Climate and Nature Committee

Report Title: Potential Climate and Nature Projects for Budget Inclusion – Financial Year 2027-28

Prepared By: Sharon Gardham

Meeting Date: 1 September 2026

Status: For Action



1. Detail

The current Local Climate and Nature Action Plan (LCNAP) runs from 2023 to 2028. Budget setting for the 2027-28 financial year needs to be completed before Christmas 2026. As such, I have carried out a review of the LCNAP which has highlighted items that have not yet been delivered and are not planned for delivery during financial year 2026-27.

To deliver the outstanding LCNAP items, the following should be considered for inclusion in budgets and delivery plans for 2027-28:

- Tiny Forest. The LCNAP item involved approaching stakeholders to identify opportunities for a Tiny Forest. This has largely been completed. As such, the Committee may wish to include monies for a Tiny/Edible Forest in the budget for 2027-28, either as part of the C&N budget, or as a discreet project. When setting budgets for the Tiny Forest, the Committee needs to also consider the cost of ongoing maintenance and the fact that we have not yet secured a site (see agenda item 9).
- Further biodiversity enhancement work, as suggested by the 2026 ecological surveys (subject to agreement from the Open Space Committee).
- Composting courses/starter kits for residents.
- Wildlife home giveaways (for example, hedgehog homes).
- Green corridor/green transport links. It is unlikely these can be delivered in 2027-28, but the Committee may wish to explore the possibility of commissioning a feasibility study.
- Public water fountains on TTC land (for example, Mundy Playing Fields, Town Hall).
- A green roof or wall on TTC properties.
- Further rainwater harvesting at TTC sites.
- Decarbonisation measures (see agenda item 5).
- Continued public and stakeholder engagement.

In addition, as the plan is coming to an end in 2028, the Committee may wish to consider the best options for devising a new five-year plan (if this is considered appropriate) to ensure continuation of the Climate and Nature agenda beyond the current plan period.

2. Implications

Environmental

The ongoing delivery of the LCNAP has positive environmental benefits for nature and climate in the Town. Additionally, the residents of Thornbury have been able to join a range of free of charge activities to enable better connection with nature. Failure to deliver some or all the remaining items in the existing plan, or to prepare a new plan beyond 2028, would compromise the progress made to date on supporting people and nature to thrive in Thornbury.

Financial

Delivery of the remaining LCNAP items will require careful budget setting and a request to the Finance and General Purpose Committee and/or Full Council that their delivery be included in TTC budgets for 2027-28.

3. Recommendations

The Committee is asked to consider:

- Which, if any, of the remaining 2023-28 LCNAP items should be ideally delivered in 2027-28.
- Whether there are any items that should be considered for inclusion in the 2027-2028 financial year budgets that are not listed in the current plan.
- Whether any outstanding plan items should be removed from the plan or carried forward to the 2029-2034 plan.
- What approach should be taken to devising a new plan for 2029-2034.

The proposed Climate and Nature budget for 2027-28 will need to be considered and approved at the C&N Committee meeting in October. As there is no Thriving Nature Working Group until November, the Committee may wish to consider holding an extraordinary Working Group in late September/early October to discuss project ideas for 2027-28.

Alternatively, Committee members could submit project ideas to the C&N Officer before the next meeting agenda deadline (Tuesday 6 October) so they can be costed where appropriate for the consideration of the C&N Committee in October.